

CONFIDENTIALSTATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐
(highlight changes)

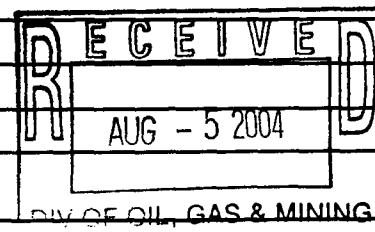
007

APPLICATION FOR PERMIT TO DRILL

1A. TYPE OF WORK: DRILL <input checked="" type="checkbox"/> REENTER <input type="checkbox"/> DEEPEN <input type="checkbox"/>		5. MINERAL LEASE NO: UTU-73528	6. SURFACE: Fee
B. TYPE OF WELL: OIL <input checked="" type="checkbox"/> GAS <input type="checkbox"/> OTHER _____ SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>		7. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
2. NAME OF OPERATOR: Wolverine Gas and Oil Company of Utah, LLC		8. UNIT OR CO. AGREEMENT NAME: Wolverine Fed. Exploration Unit	
3. ADDRESS OF OPERATOR: One Riverfront Plaza Grand Rapids MI 49503		9. WELL NAME and NUMBER: Wolverine Federal # 17-3	
PHONE NUMBER: (616) 458-1150		10. FIELD AND POOL, OR WILDCAT: Wildcat	
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: 1,736' FNL & 2,283' FWL - T23S-R1W, Sec17 SENEW AT PROPOSED PRODUCING ZONE: 1,980' FSL & 660' FWL - T23S-R1W, Sec17 NWSW		11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWSW 17 23S 1W S	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: 3.5 miles South of Sigurd		12. COUNTY: Sevier	13. STATE: UTAH
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET) appr. 200'	16. NUMBER OF ACRES IN LEASE: 8236 ac	17. NUMBER OF ACRES ASSIGNED TO THIS WELL: 40	
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET) appr. 600'	19. PROPOSED DEPTH: 7,100	20. BOND DESCRIPTION: BLM # Wy 3329	
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): 5,740' - GR	22. APPROXIMATE DATE WORK WILL START: 9/15/2004	23. ESTIMATED DURATION: 40 days	

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT	SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT
20	14	80	Conductor
12 1/2	9 5/8 36 ppf J55 STC	1,510	lead:c,360sx, 1.78, 12.8/tail:g, 280sx, 1.20, 15.6
8 3/4	5 1/2 17 ppf L80 LTC	7,100	lead:Poz, 750sx, 1.76, 13.0/tail:Poz, 350sx, 1.49 13.4

**ATTACHMENTS**

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:

- | | |
|--|--|
| <input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER | <input checked="" type="checkbox"/> COMPLETE DRILLING PLAN |
| <input checked="" type="checkbox"/> EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER | <input type="checkbox"/> FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER |

NAME (PLEASE PRINT) Richard Moritz TITLE Vice President, Land & Legal
SIGNATURE [Signature] DATE 07/22/2004

(This space for State use only)

API NUMBER ASSIGNED: 43-041-30036

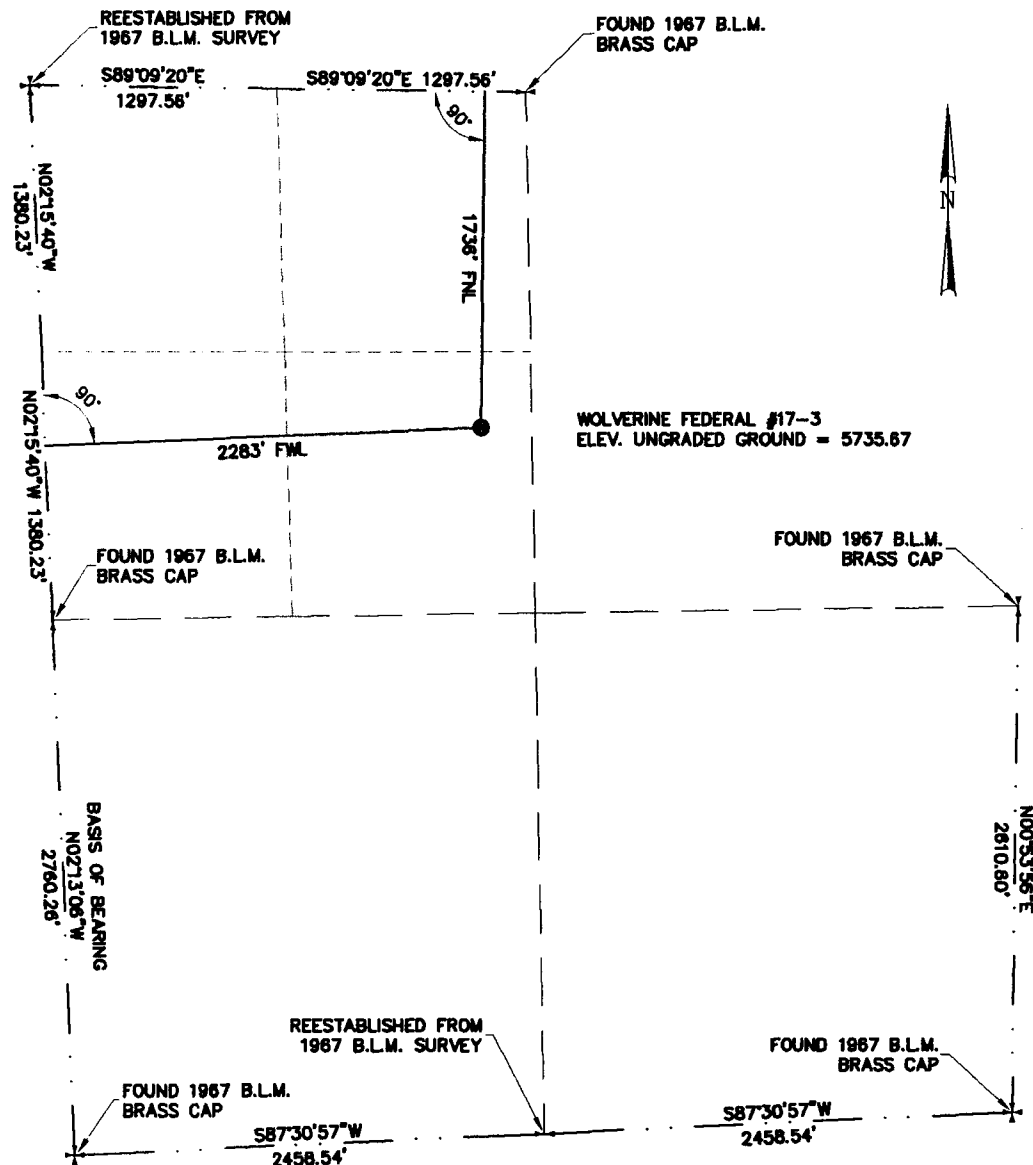
APPROVAL:

Surf 418961X BHL 418521X
4295396Y 4294839Y
38.80547 38.80041
-111.93329 -111.93829

(11/2001)

(See Instructions on Reverse Side)

Section 17, T.23 S., R.1 W., S.L.B. & M.



BASIS OF BEARINGS

BASIS OF BEARING USED WAS N02°13'06"W BETWEEN THE SOUTHWEST CORNER AND THE WEST QUARTER CORNER OF SECTION 17, T.23 S., R.1 W., S.L.B. & M.

LATITUDE = 38°48'18.901" (38.805250278)
LONGITUDE = -111°56'02.015" (111.933893056)

PROJECT Wolverine Gas & Oil Company of Utah, LLC.

WELL LOCATION, LOCATED AS SHOWN IN THE SE 1/4 OF THE NW 1/4 OF SECTION 17, T.23 S., R.1 W., S.L.B. & M. SEVER COUNTY, UTAH

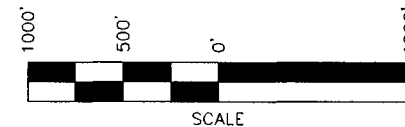
LEGEND

- ⊕ = SECTION CORNERS LOCATED
- ⊖ = QUARTER SECTION CORNERS LOCATED
- = PROPOSED WELL HEAD

NOTE: THE PURPOSE OF THIS SURVEY WAS TO PLAT THE WOLVERINE FEDERAL #17-3 LOCATION. LOCATED IN THE SE 1/4 OF THE NW 1/4 OF SECTION 17, T.23 S., R.1 W., S.L.B. & M. SEVER COUNTY.

BASIS OF ELEVATION

ELEVATION BASED ON U.S.G.S. BENCH MARK LOCATED IN THE SW 1/4 OF SECTION 17, T.23 S., R.1 W., S.L.B. & M.



CERTIFICATE

THIS IS TO CERTIFY THAT THIS PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION, AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

RYAN W. SAVAGE, L.S. #183343

DATE



Jones & DeMille Engineering

1535 South 100 West - Richfield, Utah 84701
Phone (435) 896-8266
Fax (435) 896-8268
www.jonesanddemille.com

Well Location Plat for

Wolverine Gas & Oil Company of Utah, LLC.

DESIGNED	SURVEYED	CHECKED	DRAWN	PROJECT NO.	SHEET NO.
	T.W.G.	R.W.S.	K.B.B.		
DATE	DWG NAME	SCALE			
July 2004	Wells	1" = 1000'		0406-160	1



United States Department of the Interior
BUREAU OF LAND MANAGEMENT
RICHFIELD FIELD OFFICE
150 East 900 North
Richfield, Utah 84701



003

In Reply Refer To:

3160
(UT-050)

August 10, 2004

Mr. Richard D. Moritz
Wolverine Gas and Oil Company of Utah, LLC
One Riverfront Plaza
55 Campau NW
Grand Rapids, Michigan 49503

Dear Mr. Moritz:

On July 22, 2004, four Applications for Permit to Drill and on July 28, 2004, three additional Applications for Permit to Drill were filed in this office. These seven wells are Wolverine #17-3, 17-4, 17-5, 16-1, 18-1, 19-1, and 20-1 and are on Federal lease UTU-73528. The well pad locations for these wells are in Section 17, T. 23 S., R. 1 W., SLM, Sevier County, Utah. Your applications have been reviewed for completeness in accordance with the provisions of the Federal regulations and the Onshore Oil and Gas Orders.

Based on Onshore Order 1, with the reference to the appropriate section, the following items are missing or need clarification in your applications:

Section III.G. 3, Form 3160-3 or as an attachment:

- c. Type of drilling tools (rotary or cable).
- d. Casing condition (new or used).

Section III.G. 4. a., Drilling Plan:

- (2) The anticipated contents of each geologic structure or stratum (water, oil, gas or other minerals).
- (3) Pressure control schematic.
- (4) As these are exploratory wells, the design factors for each casing string. (See Onshore Order #2, *Drilling Operations*, III. B. Casing and Cementing Requirements.)

Section III.G. 4. b., Surface Use Program:

- (3) Location of existing wells. For 17-3, 17-4, 17-5, and 16-1, the Location Map does not show the existing Well 17-2. For 18-1, 19-1, and 20-1, the Location Map does not show the existing well 17-1. Are any water wells within the one-mile parameter of the Order? At the proposed well site for 17-3, 17-4, 17-5, and 16-1, three well pads are shown. Two of the pads are assumed to be

the existing well pad (17-1) and the proposed pad (17-3 and others); however, the third pad is not identified.

- (4) Location of proposed production facilities.
- (5) Location of water supply. Be specific as to the source, if it is non-Federal.
- (9) Well site layout. Living facilities and the orientation of the rig and other facilities are not included on a layout.
- (11) Surface Ownership. The surface ownership of the well and access road shall be indicated. Where the surface of the well is privately owned, the operator shall include the name, address, and phone number, if known, of the surface owner. If privately owned, the existence of an agreement between the operator and owner needs to be provided.

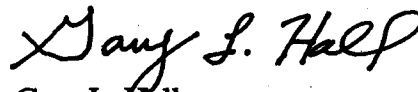
All the above items will be necessary before approval can be granted. All other portions of your application are in place, and we will continue to process your application up to the point the missing information prevents further action.

If future applications are filed, we request that Wolverine Gas and Oil adhere closely to Onshore Order No. 1, Section III. G. *Components of a Complete Application for Permit to Drill*. In the order, the Drilling Plan and the Surface Plan items are enumerated for ease of reference during both the preparation and the review of a proposal. All these items are required by regulation, and following the outline in the Order will facilitate the review of your applications. Although some items appear unnecessary or outdated, please provide the information. Unless specifically requested, additional information is unnecessary and may lengthen the review time frames.

In addition, the Application for Permit to Drill package does not need to be filed in a binder for the BLM. BLM records are kept in a file folder, so we remove the binder for ease of filing for our record keeping.

If you have any questions, please contact Michael Jackson at (435) 896-1522. Technical questions on the Drilling Plan may be directed to Al McKee at (801) 539-4045.

Sincerely,



Gary L. Hall
Assistant Field Manager

cc: Western Land Services, 54 West Seymour Street, Sheridan, Wyoming 82801



August 18, 2004

Utah Division of Oil, Gas & Mining
1594 W. N. Temple Suite 1210
Salt Lake City, Utah 84114-5801

RE: Wolverine Gas & Oil Company of Utah, LLC requests permission to drill the
Wolverine Federal #17-3

Gentlemen:

Pursuant to Rule R649-3-11 of the State's Oil & Gas Conservation regulations, Wolverine Gas & Oil Company of Utah, LLC, hereby makes application for approval to directionally drill an oil & gas well.

Wolverine Gas & Oil Company of Utah, LLC (Wolverine) proposes to drill the Wolverine Federal #17-3 well to a total depth of 7,100 feet and is an exception to Rule R649-3-3. Wolverine is the surface owner as well as the only leasehold operator within a 460 foot radius of the bore hole.

The mountainous terrain of the area is such that directional drilling is the most effective method to minimize surface disturbance. By locating the well pad on a relatively flat surface and drilling a directional well beneath this challenging topography, Wolverine can most effectively minimize surface disturbance and ensure proper utilization of resources.

Attached hereto is a plat as required by the Commissions rules and regulations.

If no objections are filed, the applicant requests that this application be approved. If objections are filed, applicant requests the matter be set for hearing and that it be advised of the hearing date.

Respectfully submitted,

Wolverine Gas & Oil Company of Utah, LLC

By


Shawn Burd
Authorized Agent

RECEIVED
AUG 19 2004

DIV. OF OIL, GAS & MINING

WESTERN LAND SERVICES - UTAH

310 South 100 East • Richfield, UT 84701 • Phone: (435) 896-1943 • Fax: (435) 893-2134

Web: www.westernls.com

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United States Department of the Interior**BUREAU OF LAND MANAGEMENT****Utah State Office****P.O. Box 45155****Salt Lake City, Utah 84145-0155****IN REPLY REFER TO:****3160****(UT-922)**

August 16, 2004

Memorandum**To: Field Office Manger, Richfield Field Office****From: Michael Coulthard, Petroleum Engineer****Subject: 2004 Plan of Development Wolverine Unit Sevier County,
Utah.**

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2004 within the Wolverine Unit, Sevier County, Utah.

API #	WELL NAME	LOCATION
(Proposed PZ Navajo)		
43-041-30032	Wolverine Federal	20-1 Sec 17 T23S R01W 0833 FSL 1925 FWL
	BHL	Sec 20 T23S R01W 0660 FNL 0660 FWL
43-041-30033	Wolverine Federal	19-1 Sec 17 T23S R01W 0857 FSL 1919 FWL
	BHL	Sec 19 T23S R01W 0660 FNL 0660 FEL
43-041-30034	Wolverine Federal	18-1 Sec 17 T23S R01W 0845 FSL 1922 FWL
	BHL	Sec 18 T23S R01W 0660 FSL 0660 FEL
43-041-30035	Wolverine Federal	17-4 Sec 17 T23S R01W 1736 FNL 2298 FWL
	BHL	Sec 17 T23S R01W 1980 FSL 1980 FEL
43-041-30036	Wolverine Federal	17-3 Sec 17 T23S R01W 1736 FNL 2283 FWL
	BHL	Sec 17 T23S R01W 1980 FSL 0660 FWL
43-041-30037	Wolverine State	16-1 Sec 17 T23S R01W 1736 FNL 2253 FWL
	BHL	Sec 16 T23S R01W 0660 FNL 0660 FWL
43-041-30038	Wolverine Federal	17-5 Sec 17 T23S R01W 1736 FNL 2268 FWL
	BHL	Sec 17 T23S R01W 1980 FNL 0660 FEL

PROJECT PLAN OF DEVELOPMENT AND MASTER SURFACE USE PLAN

Wolverine FEDERAL #17-3

NAME OF APPLICANT: Wolverine Gas and Oil Company of Utah,
LLC
One Riverfront Plaza, 55 Campau NW
Grand Rapids, Michigan 49503-2616

PROJECT NAME: "Wolverine Federal #17-3"
NW/SW of Section 17
Township 23 South – Range 1 West

ATTACHMENTS: A.) Project Map/Survey
B.) Well Site Location Layout
C.) Typical Cross Sections (Cut and Fill)
D.) Wildlife & Vegetative Species of
Concern Summary
E.) Cultural Resource Survey Report

I. DESCRIPTION OF PROJECT:

Wolverine Gas and Oil Company of Utah, LLC (Wolverine) proposes to drill and explore for hydrocarbons, using a directional drilling program, from the Navajo Formation at depths of approximately 4,810' – 7,036' and approximately 8,062' – 9,100' within the Wolverine Federal Exploration Unit situated in Sevier County, Utah:

TOWNSHIP 23 SOUTH, RANGE 1 WEST

Northwest Quarter of Southwest Quarter (NW/SW) of Section 17

Well Name & No. Target Elev. Location TD Footages

LEASE # UTU-73528					
Wolverine Federal #17-3	Navajo 1 and 2	5,736'	NW SW Sec 17, T23S-R1W	7,100'	1,680' FNL; 2,291' FWL

The attached Project Map (Attachment A) indicates the proposed well site and its intended configuration. Additionally, the existing access route is indicated. This well is being drilled within the “Wolverine Federal Exploration Unit” and upon privately owned surface.

Mineral rights within the Wolverine Federal Exploration Unit are owned by a variety of interests and are federally owned at the target bottom-hole location for this proposed well. The proposed surface plan will be reviewed and inspected by the appropriate regulatory agencies, state and federal, to ensure proper utilization of the surface reflecting an effort by Wolverine to minimize surface disturbance and waste. Appropriate Onshore Oil and Gas Orders and those of the Utah Division of Oil, Gas and Mining will be followed in the constructing, drilling, completion, operation, plugging and surface reclamation of this well.

The project is situated within an area that is referred to by the Utah Division of Oil, Gas and Mining (Statement of Basis, Kings Meadow Ranches 17-1, October 21, 2003) as “... placed in the High Plateaus section of the Colorado Plateau physiographic province in western central Utah. Some people have characterized this area as being in the Basin and Range – Colorado Plateau transition zone.” The drill site itself is located in a flat area between steep hills and is contiguous to Highway 24 from which access to this site will be established. The flat area is dominated by sagebrush – grass communities and the nearby hillsides are dominated by Pinyon Pine – Juniper communities. The access route consists of an improved driveway off from Highway 24 entering onto the well site. BLM road construction standards will be adhered to as new improvements are constructed.

Wolverine’s proposed “Wolverine Federal #17-3” project is most easily accessible from Sigurd, Utah. From Sigurd, one would drive down Highway 24 heading east/southeasterly. At mile marker 13, drive approximately 0.6 miles and turn easterly onto the existing access road driving approximately 200 yards to the proposed well pad location.

Surface water is located in the area primarily in the form of the Sevier River, in the Peterson Creek drainage, a tributary of Brine Creek. Local springs arising from the volcanic rocks and ephemeral drainages also exist in the area including a drainage way situated along Highway 24. The Sevier River is approximately three (3) miles west of this proposed location.

Geology and Soil Types

Again quoting from the “Division of Oil, Gas and Mining, Statement of Basis, Kings Meadow Ranches 17-1”, the well “...will likely spud into a thin alluvium covering the evaporate-rich Jurassic age Arapien shale.” “The Arapien Shale may have been somewhat intruded or elevated into the area between the Sevier Fault and the considerable parallel secondary faulting mapped in the Cedar Mountain – Black Mountain area...” It is anticipated that from surface to approximately 400 feet in depth, the lithology of the Quaternary will consist of unconsolidated sediments.

The soil type classified at the Wolverine Federal #17-3 wellsite is the Billings silty clay loam. This soil type is a fine-silty, mixed calcareous, mesic Typic Torrifluvents and is usually found in areas containing two (2) to five (5) percent slopes. The soil is a deep, drained, silty clay loam. It features a light gray, moderately alkaline, strongly calcareous, silty clay loam surface soil that is approximately ten (10) inches thick. The subsoils consist of a light gray, moderately alkaline, friable, silty clay loam approximately 32 inches thick. The substrate material is a light gray, moderately alkaline, friable, silty clay loam with a small amount of gypsum veining.

Assuming that the drilling and completion of this well results in its ability to commercially produce hydrocarbons, appropriate market connections will be made upon proper permitting of such activities by all agencies having jurisdiction over said activities.

II. SOIL EROSION CONTROL MEASURES:

The well pad will be sloped at about 1%, in the direction of the site’s drainage so as to provide for a well-drained work area during drilling operations. Appropriate collection and infiltration basins will be constructed in the sloped area of the drill pad.

In all fill areas, the edges shall be diked to control run off.

Appropriate drill site drainage and sedimentation control measures will be incorporated in the operational plan. These may include utilization of earthen dikes along the fill portion of the drilling pad perimeter, stabilization of slopes as needed, location of the reserve pits in the cut portion of the drilling pad and the pad constructed so as to slope toward a collection and infiltration basin. Construction of the drill site shall be in accordance with the regulations and stipulations as defined by the State of Utah, Department of Natural Resources, Division of Water Rights.

Reclamation of the site will be in accordance with Best Management Practices and requirements of the Bureau of Land Management.

III. EXISTING ACCESS ROADS AND ROAD IMPROVEMENTS

The existing access road is identified and labeled on the project map. Steep, rough topography is not identified as a problem along our access route which was constructed by initially using fill material and covering it with approximately eight (8) inches of shale/gravel. Another layer of road base material, approximately four (4) inches in depth, was placed on top of the shale/gravel.

IV. LOCATION OF EXISTING WELLS

The recently drilled “King Meadow Ranches 17-1” well is situated approximately 200 yards southwesterly of this proposed well site location and is situated in the Southeast Quarter of the Northwest Quarter (SE/NW) of Section 17, Township 23 South, Range 1 West, Sevier County, Utah. “Wolverine Federal 17-2” is located approximately one-half mile southerly of this proposed well site and is situated in the Southeast Quarter of the Southwest Quarter (SE/SW) of Section 17, Township 23 South, Range 1 West, Sevier County, Utah.

V. DRILLING METHOD

Wolverine proposes to use a directional drilling program for the Wolverine Federal #17-3. The mountainous terrain of the area is such that directional drilling is the most efficient method to minimize surface disturbance. By locating the well pad on a relatively flat surface, and drilling a directional well beneath this challenging topography, Wolverine can most effectively minimize surface disturbance and ensure proper utilization of resources.

VI. LOCATION AND TYPE OF WATER SUPPLY

Water for drilling the Wolverine Federal #17-3 will be purchased from water wells nearby or drilled on location and pumped into storage tanks at the site. Water for drilling from nearby well(s) will be hauled to location and stored in storage tanks on the drill site. Wastewater will not be discharged on the surface at this site and the drilling of the well will not require a wastewater management plan.

VII. CONSTRUCTION MATERIALS

In most circumstances, natural earth materials were used for the construction of roads and fills. These were taken from locations essentially contiguous to or nearby the locations to be improved. When necessary, road base materials were used and delivered

by the contractor for application on site and specifically as the initial fill material for the access road, which was then covered with approximately eight (8) inches of shale/gravel.

VIII. METHODS FOR HANDLING WASTE

The Reserve Pit will be dug on the well pad per the attached Well Site Location Layout (Attachment B). It will be used for the disposal of waste mud and drill cuttings and will be located on the south portion of the well site plan. The pit will be 100 feet X 240 feet and will be 10 feet deep. The pit will be lined with a synthetic liner having a minimum thickness of 12 mills and if the reserve pit is built in rock, geotextile or some other material approved by the Division of Oil, Gas and Mining shall be utilized. The Division of Oil, Gas and Mining shall be notified prior to lining the reserve pit in order to allow for Division inspection. Rules pursuant to R649-3-16 will be followed regarding the reserve pit as well as those governing Onshore Oil and Gas Operations (43 CFR 3160.)

Upon evaporation of fluids, pit closure occurs with the back fill of soil and its compaction to prevent settling. The usage of the pit is further described in the section VIII under pit closure.

All garbage will be taken off site and disposed of properly. Pursuant to R649-3-14, all rubbish and debris shall be kept in containers on the well site, and will be hauled to an approved disposal site upon completion of drilling and completion operations and as needed during such operations. There will be no chemical disposal of any type. Sewage is handled through the renting of portable toilets. These are serviced by the rental company and removed from site when no longer required.

IX. PLANS FOR RECLAMATION OF THE SURFACE

Pit closure: The pits will be fenced on three sides during all drilling operations and then the fourth side will be immediately fenced when the rig is moved off location. After evaporation of fluids, back-fill of sub-soil and compaction to prevent settling will occur within 90 days of the drilling and completing of the well. If necessary after 90 days, the fluids will be sucked out of the pit and transported off site.

The topsoil will be stripped off and stock piled in an area not to be disturbed. The topsoil will be placed back on the pit after back filling and then prepped for re-seeding.

The approximate Pit size is indicated on the Well Site Location Layout diagram attached hereto (Attachment B).

Revegetation Methods: Disturbed areas will be disked, seeded and “dragged”, as needed; seeding with a mixture approved by the local USDA Natural Resource Conservation Service or the Bureau of Land Management.

Wolverine generally requires at least twelve (12) pounds per acre of seed distribution. Wolverine suggests that autumn seeding practices be used due to the terrain in this project area. Spring rain events are common and tend to cause severe run-off. Fall seeding will allow any moisture, whether rain or snow, to assist the seed into the ground.

Other Practices: Other practices that will be utilized to reclaim disturbed areas will include riprap when and if necessary to prevent erosion and the installation of silt fencing in sensitive and/or erosive areas.

Timetable: Reclamation of the surface will commence as soon thereafter construction, drilling and well completion are concluded, as is practicable, depending on weather. In the event of a dry hole, the drill site and roadways will be restored to their original condition as nearly as practicable within 180 days after plugging date of the well.

X. SURFACE OWNERSHIP

The surface of the proposed well site is privately owned.

XI. WELLSITE LAYOUT

Please see the attached “Well Site Location Layout” (Attachment B) for the well configurations.

XII. PIPELINES AND STREAM CROSSINGS

PIPELINES: In the event of hydrocarbon production requiring transmission by pipeline, the proposed pipeline(s) will be designed, constructed, tested, operated and maintained in accordance with standard safety practices and by a combination of construction techniques intended to minimize to the greatest extent practical the impacts upon natural resources.

Pipelines will typically be installed by trenching. In these trenched areas, the contractor shall strip and stockpile topsoil to be replaced over the backfill portion upon completion of construction operations. Silt fencing will be installed at all stream crossings.

The proposed pipelines will be constructed with a combination of methods intended to minimize impacts to private, state and federally owned property, county roads

and natural resources. The pipeline will be constructed by a combination of conventional construction techniques and special measures designed to minimize impacts to natural resources. Pipelines will be adequately compacted before the topsoil is replaced for re-seeding.

In general and where required, soil erosion control measures will consist of appropriate BMPs (Best Management Practices) to reduce the potential for erosion. The BMPs that will be utilized in upland areas include use of construction barriers where appropriate, land clearing, spoil piles, staging and scheduling, seeding and mulching. Note that spoil piles will not typically be seeded since exposure of the spoil piles should be minimal in time. All other proper BMP measures will be implemented to reduce the potential for erosion. Seeding of all raw soils after burial of pipe will be performed. However, mulching will be performed only within state or county road right-of-ways.

Generally speaking, in wetlands, appropriate BMPs will be implemented to minimize the potential for soil erosion within wetland construction zones. These measures shall include, but not be limited to, clearing, barriers, staging, filters, silt fencing, spoil piles, dewatering, seeding, and mulching.

XIII. GENERAL

TIMELINE: The following is a general order of construction and sequence of earth change by which our operations will proceed:

- 1.) Access Road and Well Pad Construction
- 2.) Drilling and Well Completion Operations
- 3.) Initial Well Pad Restoration
- 4.) Clearing of Pipeline Rights-of-way (if needed)
- 5.) Delivery and Layout of Pipe
- 6.) Pipe Welding and Inspection
- 7.) Trenching of Pipe
- 8.) Placement and Burying of Pipe
- 9.) Final Restoration of Site/Access/Pipeline Route
- 10.) Re-Seeding

All hillsides, creek banks, and other places where contractor has moved earth to facilitate operations shall be restored to as near original condition as practical. Replaced material and/or backfill will be protected from erosion to the satisfaction of Wolverine, the Bureau of Land Management and the Utah Division of Oil, Gas and Mining without undue delay.

Upon completion of any backfill, contractor shall clear pipeline rights-of-way and access routes of large rocks, stumps and other debris; fill holes, ruts and depressions, and shall keep the access road in a neat and acceptable condition. All cleanup shall be maintained by the contractor until final acceptance by Wolverine and the enforcing agency.

XIV. ENVIRONMENTAL IMPACT ASSESSMENT:

It is anticipated that the drilling and operations planned, provided the success of this well, will not have any adverse affects to any wildlife or aquatic life in the area. There will be only a minor effect on the surface cover. Drilling and production operations should have minimal effect on the population patterns, land use, public utilities or public services in the near future for this rural area.

Noise levels during drilling and completion operations may be continuous but not unusually high. If production is achieved, noise levels should be minimal during the operation and maintenance of the wells.

Necessary soil erosion and sedimentation safeguards will be built into the well pad, access and future proposed pipeline routes to protect any nearby lowlands, where appropriate. Particular care will be exercised in order that all drain ditches be maintained and kept unobstructed to prevent water backup against spoil banks or backfill, causing erosion. The cumulative long-term effect on the immediate environment should be minimal.

If the well is productive, the effect on the air quality in the area is expected to be practically non-existent. Human activity in this area is somewhat limited, due to the nature of the location. Ranching operations and any activities in the area should not be adversely affected.

The site will then be contoured as closely as practical to its natural state, fine graded and stabilized. The well site and access route will be restored as soon as practical. If a well is productive, existing dikes will be maintained and erosion control procedures, as specified and required by the Bureau of Land Management, will be followed to insure protection of the local ecosystem.

Cultural

Please see, "Attachment E", Cultural Resource of A Well Pad (A-2) Near Sigurd, Sevier County, Utah.

Wildlife

Please see "Attachment D", a summary of Wildlife and Vegetative Species of Concern.

XV. SUMMARY:

In conclusion, the environmental impact of this project is considered to be minimal and every effort will be made to ensure the protection and preservation of the environment, as well as the standard of living for those affected by its operation.

This proposed project is aimed at increasing the hydrocarbon reserves within the State of Utah. In addition, in the event that production can be established in this project, it will be of financial benefit to the private holders of oil and gas rights within the "Wolverine Federal Exploration Unit", including the Bureau of Land Management in fulfillment of its stewardship responsibilities over federally owned oil and gas assets. We consider the environmental impact of this project to be slight and we will make every effort to be conscientious operators and to insure protection and preservation of the environment during the course of our drilling and producing operations.

Sincerely,

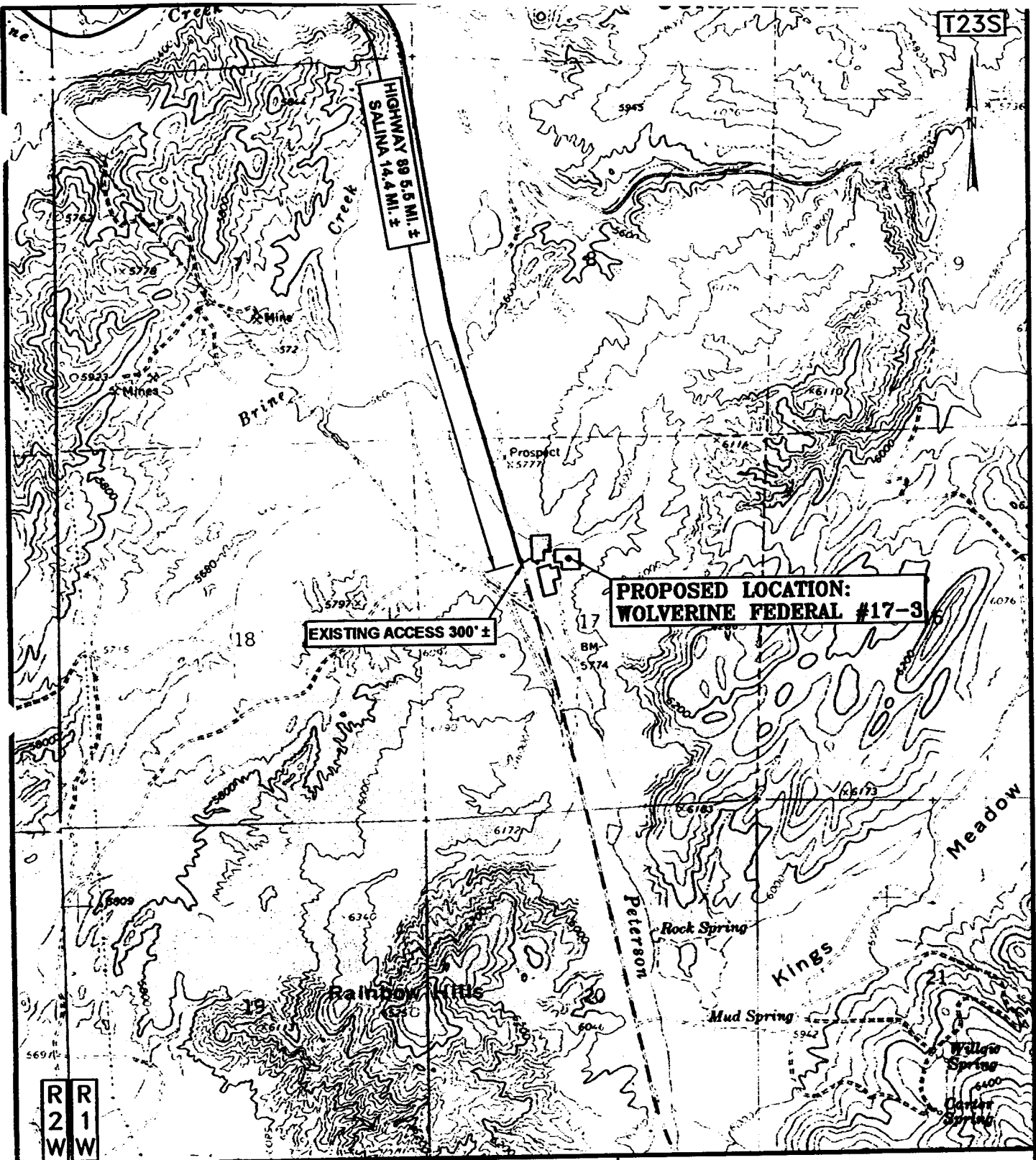
Wolverine Gas and Oil Company of Utah, LLC

By: 

Shawn Burd

Authorized Permitting Agent:

Western Land Services – Western Division
54 West Seymour Street
Sheridan, WY 82801
Donald L. Anderson, Chief Operating Officer
Phone: 307-673-1817
Local Contact: Shawn Burd
Phone: 435-896-1943



R
2
W

LEGEND

- EXISTING ROAD
- - - - - EXISTING ACCESS ROAD



Jones & DeMille Engineering

1535 South 100 West – Richfield, Utah 84701
 (435) 896-8266 Phone
 (435) 896-8268 Fax
www.jonesanddemille.com

Wolverine Federal #17-3
 Section 17, T.23 S., R.1 W., S.L.B. & M.
 1736' FNL 2283' FWL
 1480 7231

Wolverine Gas & Oil Co.
Wolverine Federal #17-3

Location Map

SCALE: 1" = 2000'

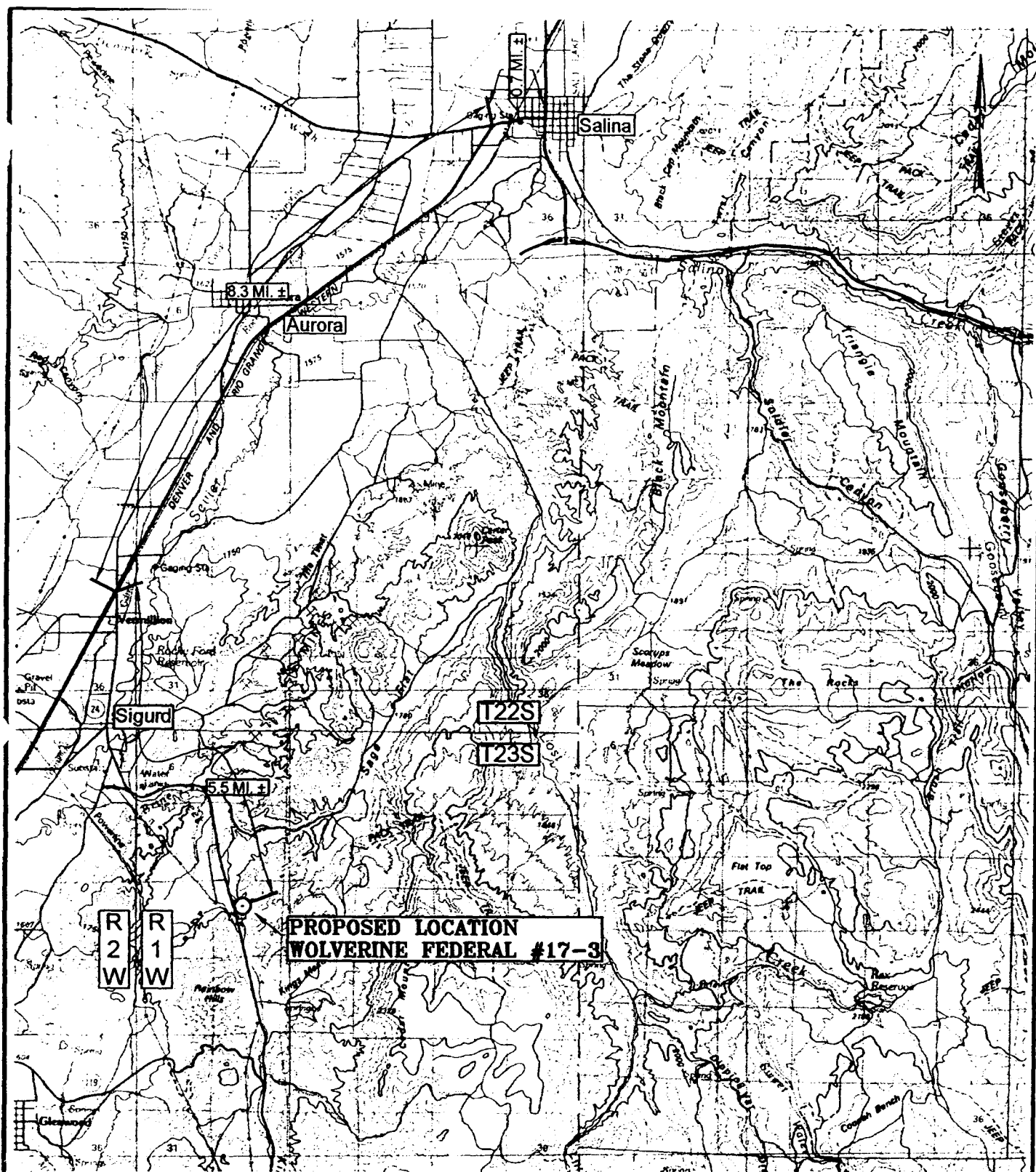
ENG.:

PROJ.#: 0406-160

DATE: July 2004

DWG.BY: K.B.B.

DWG.NAME: Wells



LEGEND



PROPOSED LOCATION



Jones & DeMille Engineering

1535 South 100 West - Richfield, Utah 84701

(435) 896-8266 Phone

(435) 896-8268 Fax

www.jonesanddemille.com

Wolverine Federal #17-3

Section 17, T.23 S., R.1 W., S.L.B. & M.

1786' FNL 2263' FWL

1684 2791

Wolverine Gas & Oil Corp.

Wolverine Federal #17-3

Location Map

SCALE: 1" = 10000'

ENG.:

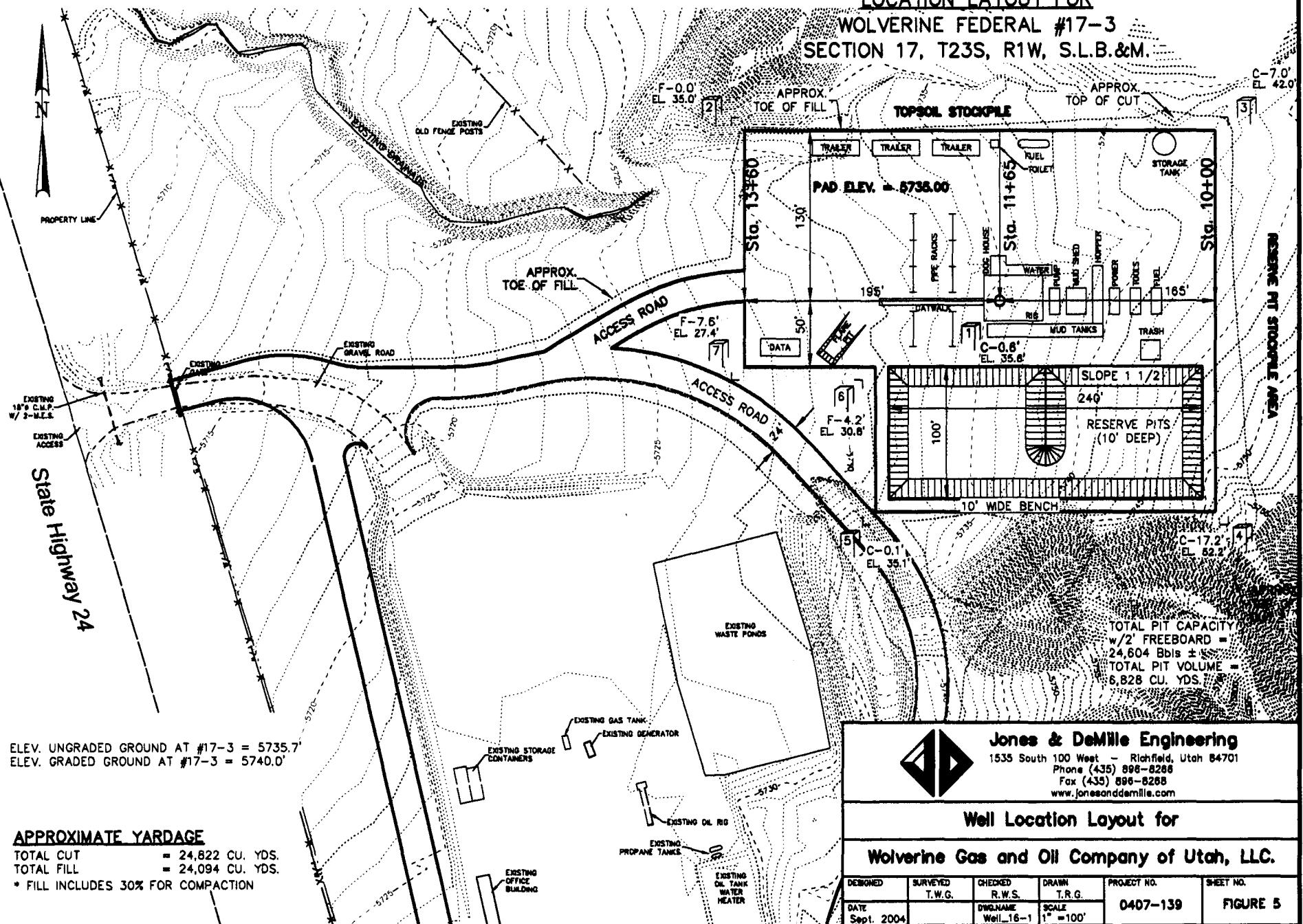
PROJ. # 0406-160

DATE: July 2004

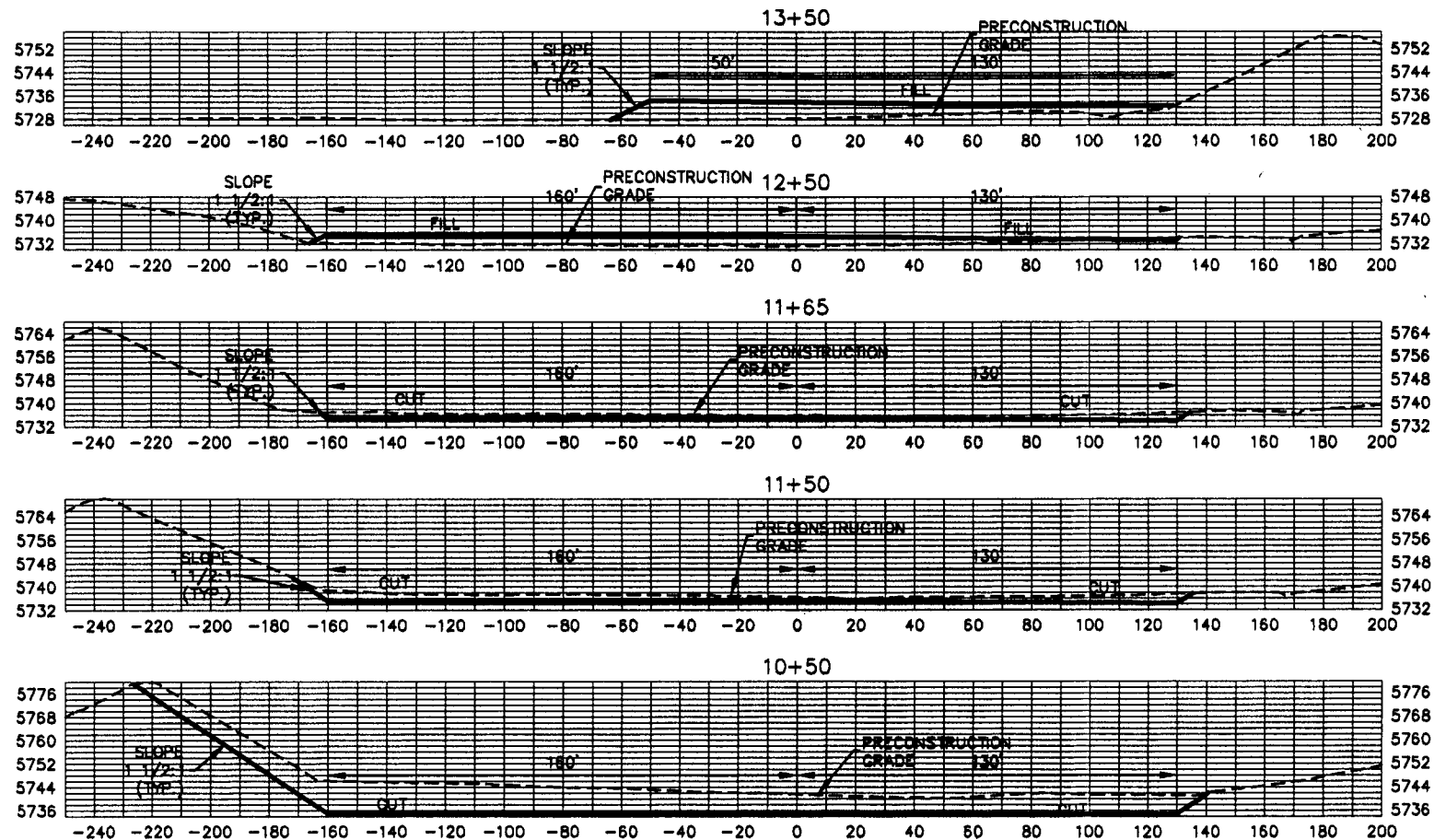
DWG. BY: T.R.G.

DWG. NAME: pro_location

LOCATION LAYOUT FOR
WOLVERINE FEDERAL #17-3
SECTION 17, T23S, R1W, S.L.B.&M.



WOLVERINE GAS & OIL COMPANY OF UTAH, LLC.
TYPICAL CROSS SECTIONS FOR
WOLVERINE FEDERAL #17-3
SECTION 17, T23S, R1W, S.L.B.&M.



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 www.jonesanddemille.com

Typical Cross Sections for

Wolverine Gas & Oil Company of Utah, LLC.

DESIGNED T.W.G.	SURVEYED T.W.G.	CHECKED R.W.S.	DRAWN T.R.G.	PROJECT NO. 0407-139	SHEET NO. FIGURE 5A
DATE Sept. 2004		DWGNAME Design	SCALE 1" = 60'		

Wolverine Federal #17-3

The Wolverine Federal #17-3 well site is located approximately 3.5 miles southeast of the town of Sigurd in Township 23 South - Range 1 West, Section 17: Northwest Quarter of the Southwest Quarter (NW/SW) Salt Lake Base and Meridian in Sevier County, Utah.

The proposed Wolverine Federal #17-3 is situated adjacent to Highway 24 in a gentle rolling plains with hilly terrain on the east side. Plant habitat types within the area consist of a combination of Pinyon Pine– Juniper, located on the hillsides, and sagebrush – grass communities in the less gradient areas.

THE PROPOSED ACTIONS

The proposed depth is 7,100 feet for the Wolverine Federal #17-3 well. The well pad dimensions will be approximately 360 feet by 280 feet. The access road was constructed by initially using fill material and covering it with approximately 8 inches of shale/gravel. Another layer of road base material, approximately 4 inches in depth, will be placed on top of the shale/gravel.

WILDLIFE AND VEGETATIVE SPECIES OF CONCERN

Potential effects concerning federally endangered, threatened, proposed, candidate, sensitive, and management indicator wildlife and vegetative species has been evaluated in the proposed area of disturbance before any surface disturbing activities have occurred. It is understood that these activities and the proposed location will be monitored by a BLM staff or approved biologist. A habitat analysis has been completed to evaluate which species may occur in the area. Surface use guidelines will be followed as will surface use restrictions and time limit stipulations in the area of concern for all affected species. There is the possibility that small clumps of Penstemon plants may be located within this project area. Wolverine Gas and Oil Company of Utah, LLC will take all necessary steps to protect the species of concern and as stipulated by the Bureau of Land Management.

Cultural Resource Inventory of A Well Pad (A-2) Near Sigurd, Sevier County, Utah



**Jason Bright
Mountain States Archaeology, LLC
7190 South State Street
Midvale, Utah 84047**

**Project Number U-04-MV-0646p
BLM Permit UT0480011**

Cultural Resources Report UT0421

July 13, 2004

Cultural Resource Inventory of A Well Pad (A-2) Near Sigurd, Sevier County, Utah

Project Description

In July 2004, Western Land Services contracted Mountain States Archaeology to perform Class III cultural resource inventory of a small well pad and access route in Sevier County, Utah on behalf of Wolverine Oil and Gas.

The well pad and access route are located in Township 23 South Range 1 West, NW ¼ of SE ¼ of NW ¼ of Section 17 (Figure 1). A records search was performed for this area on March 2, 2004 at Utah SHPO. Craig Harmon at the Richfield BLM office forwarded records search information for a nearby project (Bright 2004a) on March 26th, 2004. Fieldwork was completed July 12th 2004.

Records Search

A number of previously completed projects were found within a mile of the current project locations. These include U-89-BL-0464 (the Sigurd/Kings Meadow Power Line), U-91-BL-0409 (Telephone Reroute), U-93-BL-0184 (Sage Flat Landfill), U-94-BL-0078 (Sage Flat Landfill Road), U-97-SC-0217 (Chevron Seismic Prospect) and U-99-BL-0488 (Salina Exchange).

In addition to these projects, MSA has completed or is currently involved with a number of other nearby projects. These include U-04-MV-0262 (Wellpad 17-2) located just southwest and across Highway 24 of the current or project, U-04-MV0395b, a pipeline from Wellpad 17-2 to Sigurd, U-04-MV-0647, another well pad located immediately north and east of A-2 (Figure 1) and U-04-MV-0106, a series of 8 seismic lines, one of which runs to the south of the current project location.

The seismic line survey documented two sites within a mile of the current project. Site 42SV2667 and 42SV2668 are small historic sites consisting of fence posts (e.g corrals) and trash scatters located west (42SV2667) and south (42SV2668) of the current project location. Neither site will be impacted by proposed activities.

Methods

The well pad location was plotted by MSA with coordinates provided by the client. The well pad itself is 360 feet by 180 feet, and was inventoried by one archaeologist walking 15-meter transects.

Environment

The project location is located just east of Highway 24, south of Sigurd, Utah. Ground visibility was good within the well pad. The general area has already been developed. Vegetation is composed sagebrush with various bunch grasses and forbs. Sediments are a light brown sand and silt.

Results

No cultural resources were located within the well pad or access route. This includes archaeological sites and isolated finds.

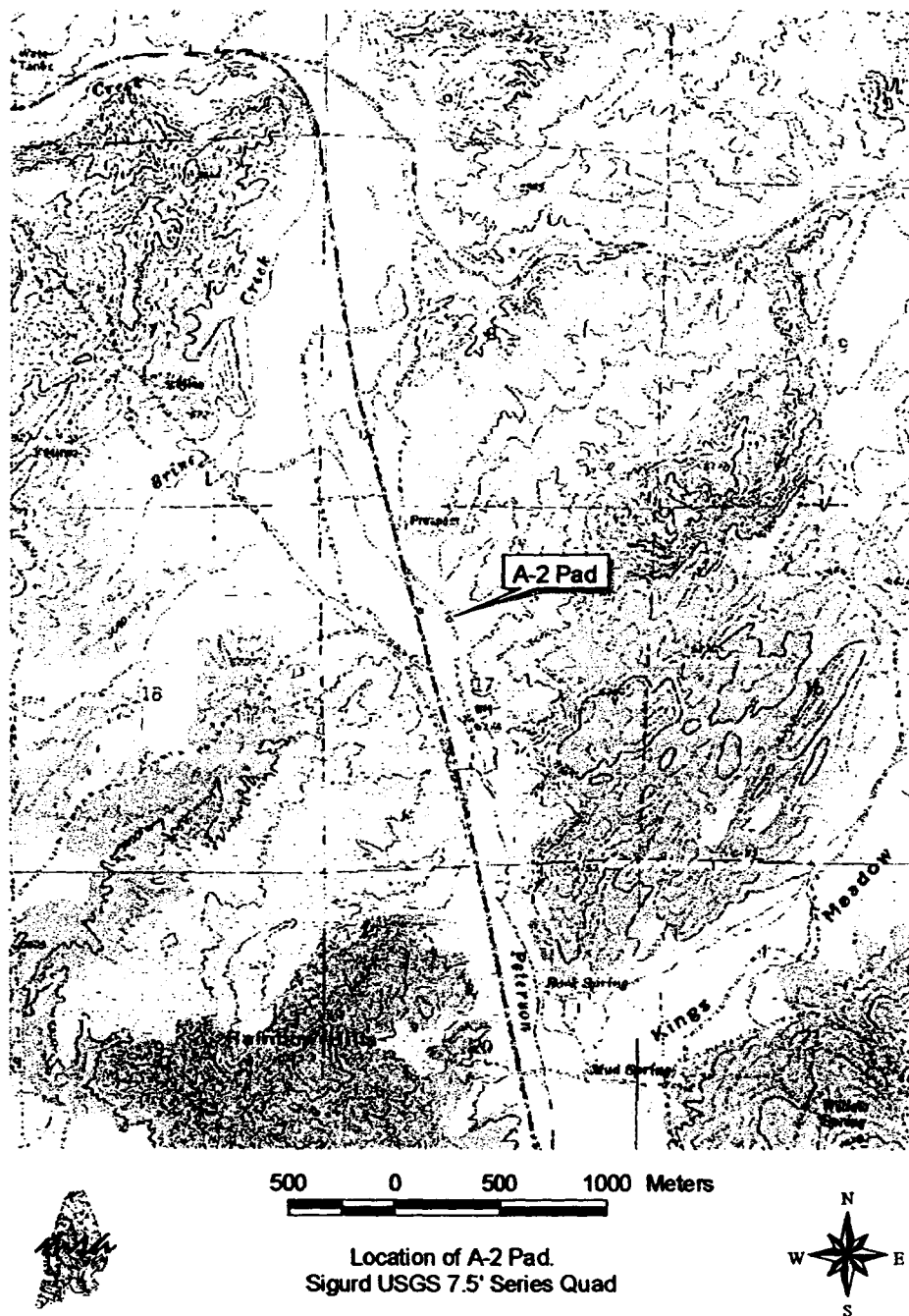


Figure 1. Location of A-2 well pad

WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC

DRILLING PROGNOSIS

Wolverine Federal #17-3
NW SW SEC 17-T23S-R1W
SEVIER CO., UTAH

BRIEF DRILLING PLAN

Due to surface topography constraints, directionally drill a 7100' MD (6550' TVD) test of the Navajo 1 formation on a day work contract basis from Wolverine's present work area known as Drill Pad A-2 located in Sec 17 T23S – R01W, Sevier Co, UT. Please refer to the directional drilling plan attached for detailed hole angle, trajectory and target information. Deviation is the primary drilling concern in this area. No abnormal pressure or hydrogen sulfide gas is expected, however, an H2S detector will be utilized. The projected surface and bottom hole locations are to be as follows:

Surface Location: 1680' fnl & 2291' fwl of Sec 17 T23N – R01W
BHL @ top of NVJO1 (5800' TVD) 1980' fsl & 660' fwl of Sec 17 T23N – R01W

14" conductor casing will be cemented to surface at approximately 80 ft BGL. 9-5/8" surface casing will be set & cemented to surface in a 12-1/4" hole deviated to approximately 10 deg at +/-1506' (+/-1500' TVD). An 8-3/4" hole will then be drilled to +/- 7100' (6550' TVD). 5-1/2" production casing will then be set & cemented to 500' into the surface casing.

EMERGENCY NUMBERS

Sevier Valley Medical Center	(435)-896-8271
Medical Helicopter	(800)-453-0120
Sheriff Department	(435)-896-2600
Fire Department-Richfield, UT	(435)-896-5479
Bureau of Land Management (Richfield):	(435)-896-1500
Bureau of Land Management (Salt Lake City)	(801) 539-4045
Utah Division of Oil, Gas and Mining (Salt Lake City):	(801)-538-5340

Bureau of Land Management;

Contact Al McKee with BLM (801) 539-4045 24 hrs prior to 1) spudding, running and cementing all casing strings 2) Pressure testing of BOPE or any casing string 3) Pressure integrity test (mud weight equivalency test) of each casing shoe.

NOTE: Ensure the rig, the cementing and testing procedures ALL comply with BLM and Onshore Oil and Gas Order No.2, requirements .

Utah Division of Oil, Gas and Mining

Contact Carol Daniels (801) 538-5284, 24 hrs prior to spudding

GENERAL INFORMATION

OBJECTIVE: Navajo 1 @ 5800' (TVD) **ELEVATION:** 5740' GL (est)

PROJECTED TOTAL DEPTH: 7,100 MD; 6550' TVD

SURFACE LOCATION: 1680' FNL & 2291' FWL
Section 17-23S-1W

COUNTY: Sevier **STATE:** Utah

DIRECTIONS TO LOCATION: From town of Sigurd, Utah go south approximately
4.0 miles on Hwy #24 to location on the left side of
road.

PROPOSED CASING PROGRAM:

Hole Size	Casing Size	Wt./Ft.	Grade	Joint	Measured Depth Set
	14"				80'
12¼"	9-5/8"	36#	J-55	STC	0'-1,510'
8-3/4"	5½"	17#	L-80	LTC	0'-7,100'

Hole Size	Casing Size	Drift ID, in.	OD of Couplings	Annular Volume in OH, cf/ft	Annular Volume in Csg, cf/ft	Capacity of casing, cf/ft
	14"					
12¼"	9-5/8"	8.379	10.625	0.3127	0.4659	0.4340
8-3/4"	5½"	4.767	6.050	0.2526	0.2691	0.1305

GEOLOGIC INFORMATION:

Formation	Interval (TVD)	Interval (MD)	Lithology	Prod	Abnormal Psi
Arapien	Surf – 5504'	Surf – 6010'	Shale, siltstone, salt, evaporates		
TwinCreek1	5504' - 5800'	6010' – 6325'	Carbonates		
Navajo 1	5800- 6350'	6325' – 6900'	Sandstone w/ minor shale	X	
Total Depth	6550'	7100'	Sandstone w/ minor shale		

CONSTRUCTION OF SURFACE LOCATION

360' x 180' Pad

150' x 100' x 10' Reserve Pit with a 12 mil synthetic liner

72" diameter tin horn cellar, 4' to 5' deep.

Flare pit a minimum of 100' from wellhead.

SURFACE HOLE: 0' to 1510'

Directionally drill a 12-1/4" hole with a TCI rock bit, mud motor & MWD equipment to approximately 1510' using fresh water and gel/lime sweeps when necessary (make hole to fit 9-5/8" casing). Loss circulation is not expected to be a problem in this interval. If losses do occur, begin pumping LCM sweeps. If loss circulation cannot be healed with ± 25 ppb LCM, consider dry drilling (no returns). Run survey at every 200' and at TD or as needed to insure bottom hole location.

PRESSURE CONTROL & SAFETY EQUIPMENT FOR SURFACE HOLE

Bottom to Top

14" x 13-5/8" 3M weld on flange

13-5/8" 3M x 13-5/8" 3M spacer spool w/ 3" outlets & valves.

13-5/8" 3M Annular preventer, connected to accumulator with enough capacity to close annular and retain 200 psi above pre-charge pressure

13-5/8" Drilling Nipple with fill up and circulating line.

Upper kelly cock valves with handles available

Test Annular to 1500 psi. Test all valves and lines.

MUD PROGRAM FOR SURFACE HOLE

DEPTH	MUD WEIGHT	TYPE	VISC	PH	FLUID LOSS
0 -1510'	8.4 – 8.9	FW/Gel/Lime	26-45	7-9	N/C

Note: Sweep hole every 100 – 200 feet or as needed for hole cleaning. Control the pH with Lime & Caustic to aid in gel flocculation for better carrying capacity.

CASING PROGRAM FOR SURFACE HOLE

DEPTH	SIZE	LENGTH	WT	GRADE	THREAD	REMARKS
0 - 1510'	9 5/8"	1510'	36#	J-55	ST&C	

Casing Running Sequence:

Texas pattern notched guide shoe,

1 jt of 9 5/8" 36# J-55 ST&C

Float collar

Balance of 9-5/8" 36# J-55 ST&C

10 – centralizers equally spaced.

RU cement co., hold safety meeting, test lines, cement 9-5/8" casing per cement company recommendation. Displace with fresh water or mud if used. ***Do not overdisplace cement.***

CEMENTING PROGRAM FOR SURFACE HOLE

Lead:

360 sx 35:65 Poz: Class C or type 5
6% Bentonite
1% Calcium Chloride
0.25 lb/sx Cello Flake

Mixed at: 12.8 ppg
Yield: 1.78 ft³/sx
Water: 9.42 gal/sx

Tail:

280 sx Class G
2% Calcium Chloride
.25 lb/sx Cello Flake

Mixed at: 15.6 ppg
Yield: 1.20 ft³/sx
Water: 5.25 gal/sx

MUST CIRCULATE CEMENT TO SURFACE per BLM requirements. If the cement does **not** circulate to surface contact the BLM office at (435) 896-1500. They will require either a temperature survey or a cement bond log to be run, then determine what remedial action will be taken before drilling out.

WOC A TOTAL OF 24 HOURS:

Wait 4 hours with the hydrostatic pressure of the displacement fluid in place, then cut off conductor and weld on an 11" 3M x 9-5/8" SOW casing head. NU BOPE and choke manifold.

**PRESSURE CONTROL AND SAFETY EQUIPMENT FOR
PRODUCTION STRING****Bottom to Top**

11" 3M x 9-5/8" csg head.

11" 3M x 11" 3M spacer spool

11" 3M Double Ram Preventer w/ 4-1/2" Pipe ram on top and blind ram on bottom. Two side outlets, choke side will have two 3" x 3M gate valves. Kill side will have two 2-1/16 x 3M gate valves and one 2" x 3M check valve.

Connect BOP to choke manifold with pressure guage.

11" 3M Annular preventer.

11" 3M short rotating head with fill-up line

Upper kelly cock valves with handles available

Safety valves and subs to fit all drill string connections in use

Inside BOP or float sub available

Testing Procedure:**Annular Preventer**

The annular preventer will be pressure tested to 1500 psi for a period of ten minutes or until provisions of the test are met, whichever is longer. At a minimum, the pressure test will be performed:

- 1) When the annular is initially installed
- 2) Whenever any seal subject to test pressure is broken
- 3) Following related repairs and at 30 day intervals

The annular preventer will be functionally operated once per week.

Blowout Preventer

The BOP, choke manifold and related equipment will be pressure tested to 2500 psi, 70% of the internal yield of the casing. Pressure will be maintained for a period of at least ten minutes or until the requirements of the test are met, whichever is longer. At a minimum the pressure test will be performed:

- 1) When the BOP is initially installed
- 2) Whenever any seal subject to test pressure is broken
- 3) Following related repairs and at 30 day intervals

The pipe and blind rams will be activated each trip, but not more than once each day. All BOP drills will be recorded in the IADC driller's log.

Accumulator:

The accumulator will have sufficient capacity to open the hydraulically controlled gate valve (if so equipped), close all rams plus the annular preventer, and retain a minimum of 200 psig above pre-charge on the closing manifold without the use of the closing unit pumps. The reservoir capacity will be double the accumulator capacity, and the fluid level will be maintained at the manufacturer's recommendations. The accumulator shall have 2 independent power sources to close the preventers. Nitrogen bottles may be one of the independent power sources and, if so, shall maintain a charge equal to the manufacturer's specifications.

The accumulator pre-charge pressure test will be conducted prior to connecting the closing unit to the BOP stack and at least once every six months thereafter. The accumulator pressure will be corrected if the measured pre-charge pressure is found to be above or below the maximum or minimum limits specified in Onshore Oil & Gas Order Number 2 (only nitrogen gas may be used to pre-charge).

Choke Manifold Equipment, Valves and Remote Controls

All choke lines will be straight lines unless turns use tee blocks or are targeted with running tees, and will be anchored to prevent whip and vibration

A valve will be installed in the closing line as close as possible to the annular preventer to act as a locking device. This valve will be maintained in the open position and will be closed only when the power source for the accumulator is inoperative.

Remote controls shall be readily accessible to the driller. Remote controls will be capable of both opening and closing all preventers. Master controls will be at the accumulator and will be capable of opening and closing all preventers and the choke line valve (if so equipped).

The choke manifold and BOP extension rods with hand wheels will be located outside the rig sub structure. The hydraulic BOP closing unit will be located at least twenty-five feet from the well head but readily accessible to the driller. Exact locations and configurations of the hydraulic BOP closing unit will depend upon the particular rig contracted to drill this well.

A flare line will be installed after the choke manifold, extending 125 feet from the center of the drill hole to a separate flare pit.

PRODUCTION HOLE: 1,510' TO 7,100'

Trip in the hole with an 8 3/4" insert bit, mud motor & MWD. Drill float, shoe and 20' of new hole. Perform an integrity test to 820 psi (10.5 ppg mud wt equivalent). Drill with a salt saturated mud to the top of the Twin Creek formation.

MUD PROGRAM FOR PRODUCTION HOLE

<u>DEPTH</u>	<u>MUD WEIGHT</u>	<u>TYPE</u>	<u>VISC</u>	<u>pH</u>	<u>FLUID LOSS</u>
1510' – 5900'	9.8 – 10.3	Saturated Salt	34-45	9.0-10.0	20cc or Less
5900' - 7100'	9.8 – 10.3	Saturated Salt	36-45	9.0-10.0	12cc or Less

Add bulk salt to increase weight to 9.8 ppg. Maintain the pH at 9.0 to 10.0 using lime and caustic. Walk viscosity up to 34 cp. Start bringing fluid loss up to 20 cc. If loss circulation becomes a problem use LCM sweeps to control seepage & clean hole.

EVALUATION PROGRAM FOR PRODUCTION HOLE

At TD, circulate and condition hole clean for logs. Short trip to the last bit trip depth monitoring well closely for flow. TOH for logs.

Mudlogger: From surface casing to total depth.

Electric Logs:

Tool	Surf csg to TD
Dipole Sonic w/ GR	Yes
Dual laterolog and microlog w/ GR & Caliper	Yes, GR to surf
LithoDensity/Neutron w/ GR & Caliper	Yes
Micro Imaging Dipmeter	Yes

DST: To be decided

Cores: To be decided

CASING PROGRAM FOR PRODUCTION HOLE

DEPTH	SIZE	LENGTH	WT	GRADE	THREAD	REMARKS
0' – TD'	5 ½"	7100'	17.0#	L-80	LT&C	

Rig up casing tools and run 5 ½" production casing as follows:

Float shoe

2 joint of 5 ½" 17.0# L-80 LT&C casing

Float collar

28 Centralizers, middle shoe joint and one every other joint to 5000'.

Run balance of 5 ½" 17.0# L-80.

CEMENT PROGRAM FOR PRODUCTION CASING

Lead:

750 sx (50:50) Poz: Premium

3 % Bentonite

0.4% Halad R-567 (Low Fluid Loss Control)

gal/sx

15 % Salt

5 lbm/sk Gilsonite

0.3% D-AIR 3000 (Defoamer)

0.25 lb/sx Flocele

Weight: 13.0 ppg

Yield: 1.76 ft³/sx

Water: 8.44

Tail:

350 sx (50:50) Poz: Premium

2 % Bentonite

0.2% Halad R-322 (Low Fluid Loss Control)

gal/sx

3 % KCL Salt

3 lbm/sk Silicate Compacted (light Weight Additive)

1 lbm/sk Granulite TR ¼ (Lost Circulation Additive)

0.2% WG-17 (Suspension Agent)

0.25 lb/sx Flocele

Weight: 13.4 ppg

Yield: 1.49 ft³/sx

Water: 7.09

TOC at ± 1,000 ft

Calculate cement volume based on log caliper +/- 20%. Displace cement w/water.

Set slips, ND BOP's, cut off, NU & test wellhead. Clean pits and release rig.

SCHEDULE

Location preparation is presently scheduled to begin on or about October 15, 2004

Drilling operations are anticipated to begin on or about November 15, 2004

end



Wolverine Gas & Oil Co of Utah, LLC

SITE DETAILS

Azimuths to True North
Magnetic North: 12.95°



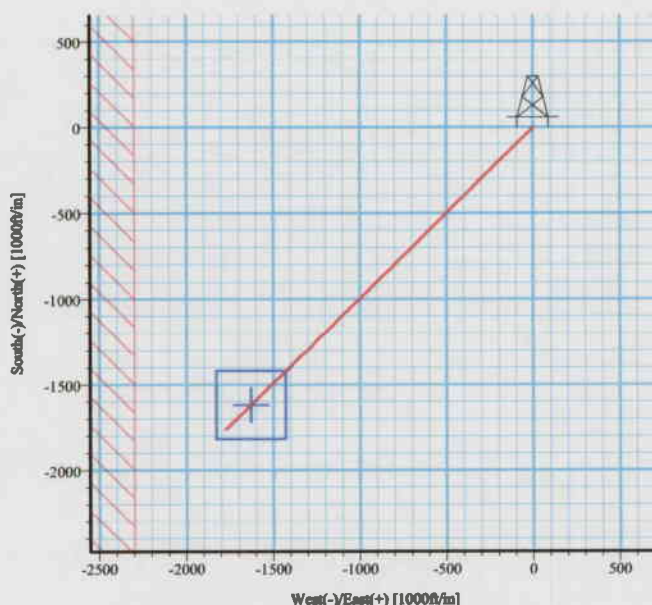
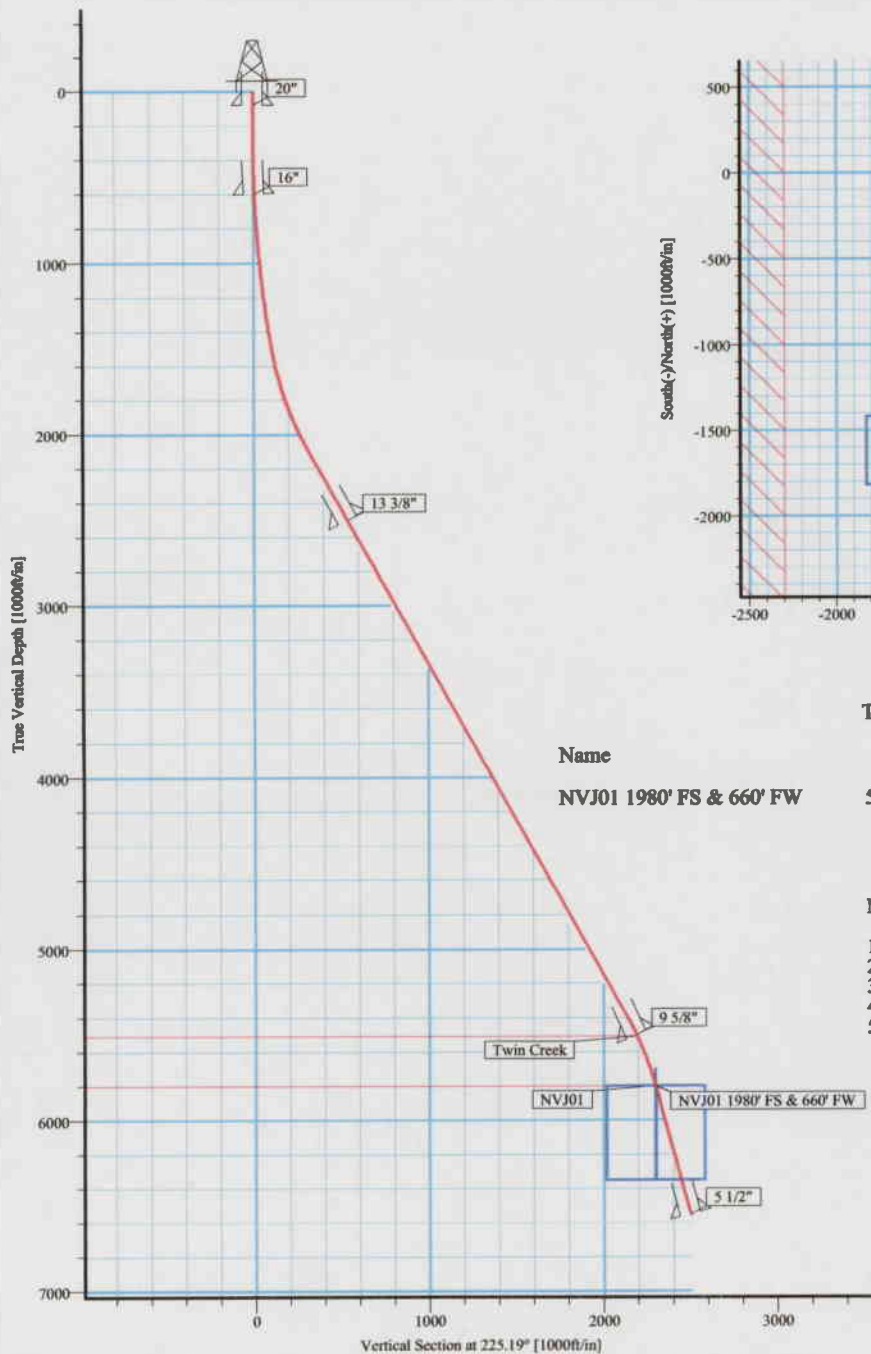
Magnetic Field
Strength: 52133nT
Dip Angle: 64.57°
Date: 7/6/2004
Model: igrf2000

Pad A-2
T238 R01W Sevier County, Utah
NW/4 SE/4 Sec 17

17-3 SFC Location
1680' FNL & 2291' FWL Sec 17

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	300.0	0.00	225.19	300.0	0.0	0.0	0.00	226.06	0.0	
3	1506.1	10.00	225.19	1500.0	-74.0	-74.5	0.83	225.19	105.0	
4	2136.8	28.92	225.19	2092.0	-221.4	-222.9	3.00	0.00	314.2	
5	5882.7	28.92	225.19	5370.7	-1498.0	-1508.2	0.00	0.00	2125.7	
6	6346.7	15.00	225.19	5800.0	-1620.0	-1631.0	3.00	180.00	2298.8	NVJ01 1980' FS & 660' FW
7	7123.2	15.00	225.19	6550.0	-1761.6	-1773.6	0.00	0.00	2499.8	



TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
NVJ01 1980' FS & 660' FW	5800.0	-1620.0	-1631.0	Rectangle (400x400)

CASING DETAILS

No.	TVD	MD	Name	Size
1	80.0	80.0	20"	20.000
2	600.0	600.1	16"	16.000
3	2500.0	2603.0	13 3/8"	13.375
4	5500.0	6027.5	9 5/8"	9.625
5	6550.0	7123.2	5 1/2"	5.500

FORMATION TOP DETAILS

No.	TVDPath	MDPath	Formation
1	5504.0	6031.9	Twin Creek
2	5800.0	6346.7	NVJ01

Plan: 17-3 (17-3/1)

Created By: Steve Schmitz, P.E. Date: 10/21/2004
Checked: _____ Date: _____

Weatherford Directional Services

Planning Report

Company: Wolverine Gas & Oil Co of Utah Field: Sevier County, Utah Site: Pad A-2 Well: 17-3 Wellpath: 1	Date: 10/21/2004 Time: 08:29:40 Page: 1 Co-ordinate(NE) Reference: Well: 17-3, True North Vertical (TVD) Reference: SITE 0.0 Section (VS) Reference: Well (0.00N,0.00E,225.19Azi) Plan: 17-3
--	---

Field: Sevier County, Utah

Map System: US State Plane Coordinate System 1927
Geo Datum: NAD27 (Clarke 1866)
Sys Datum: Mean Sea Level

Map Zone: Utah, Central Zone
Coordinate System: Well Centre
Geomagnetic Model: igrf2000

Site: Pad A-2
 T23S R01W Sevier County, Utah
 NW/4 SE/4 Sec 17

Site Position:	Northing:	ft	Latitude:	
From: Lease Line	Easting:	ft	Longitude:	
Position Uncertainty:	0.0 ft		North Reference:	True
Ground Level:	0.0 ft		Grid Convergence:	-0.28 deg

Well: 17-3

Slot Name:

Well Position:	+N/-S	-1.0 ft	Northing:	172190.37 ft	Latitude:	38 48 18.890 N
	+E/-W	-15.0 ft	Easting :	1876337.48 ft	Longitude:	111 56 2.013 W
Position Uncertainty:		0.0 ft				

Wellpath: 1

Current Datum: SITE	Height	0.0 ft	Drilled From: Surface	
Magnetic Data: 7/6/2004			Tie-on Depth:	0.0 ft
Field Strength: 52133 nT			Above System Datum:	Mean Sea Level
Vertical Section: Depth From (TVD)	+N/-S		Declination:	12.95 deg
ft	ft		Mag Dip Angle:	64.57 deg
	ft		+E/-W	Direction
			ft	deg
5800.0	0.0		0.0	225.19

Plan: 17-3

Date Composed: 7/6/2004
Version: 1
Tied-to: From Surface

Principal: Yes

Section 1 : Start Hold

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
80.0	0.00	0.00	80.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
100.0	0.00	225.19	100.0	0.0	0.0	0.0	0.00	0.00	0.00	225.19
200.0	0.00	225.19	200.0	0.0	0.0	0.0	0.00	0.00	0.00	225.19
300.0	0.00	225.19	300.0	0.0	0.0	0.0	0.00	0.00	0.00	225.19

Section 2 : Start Build 0.83

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
400.0	0.83	225.19	400.0	-0.5	-0.5	0.7	0.83	0.83	0.00	0.00
500.0	1.66	225.19	500.0	-2.0	-2.1	2.9	0.83	0.83	0.00	0.00
600.0	2.49	225.19	599.9	-4.6	-4.6	6.5	0.83	0.83	0.00	0.00
600.1	2.49	225.19	600.0	-4.6	-4.6	6.5	0.00	0.00	0.00	0.00
700.0	3.32	225.19	699.8	-8.2	-8.2	11.6	0.83	0.83	0.00	0.00
800.0	4.15	225.19	799.6	-12.7	-12.8	18.1	0.83	0.83	0.00	0.00
900.0	4.97	225.19	899.2	-18.3	-18.5	26.0	0.83	0.83	0.00	0.00
1000.0	5.80	225.19	998.8	-25.0	-25.1	35.4	0.83	0.83	0.00	0.00
1100.0	6.63	225.19	1098.2	-32.6	-32.8	46.3	0.83	0.83	0.00	0.00
1200.0	7.46	225.19	1197.5	-41.2	-41.5	58.5	0.83	0.83	0.00	0.00
1300.0	8.29	225.19	1296.5	-50.9	-51.2	72.2	0.83	0.83	0.00	0.00
1400.0	9.12	225.19	1395.4	-61.6	-62.0	87.4	0.83	0.83	0.00	0.00
1506.1	10.00	225.19	1500.0	-74.0	-74.5	105.0	0.83	0.83	0.00	0.00

Weatherford Directional Services

Planning Report

Company: Wolverine Gas & Oil Co of Utah
 Field: Sevier County, Utah
 Site: Pad A-2
 Well: 17-3
 Wellpath: 1

Date: 10/21/2004 Time: 08:29:40
 Co-ordinate(NE) Reference: Well: 17-3, True North
 Vertical (TVD) Reference: SITE 0.0
 Section (VS) Reference: Well (0.00N,0.00E,225.19Azi)
 Plan: 17-3

Page: 2

Section 3 : Start Build 3.00

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
1600.0	12.82	225.19	1592.0	-87.1	-87.7	123.6	3.00	3.00	0.00	0.00
1700.0	15.82	225.19	1688.9	-104.5	-105.2	148.3	3.00	3.00	0.00	0.00
1800.0	18.82	225.19	1784.4	-125.5	-126.3	178.0	3.00	3.00	0.00	0.00
1900.0	21.82	225.19	1878.1	-149.9	-150.9	212.8	3.00	3.00	0.00	0.00
2000.0	24.82	225.19	1970.0	-177.8	-179.0	252.3	3.00	3.00	0.00	0.00
2100.0	27.82	225.19	2059.6	-209.1	-210.5	296.7	3.00	3.00	0.00	0.00
2136.8	28.92	225.19	2092.0	-221.4	-222.9	314.2	3.00	3.00	0.01	0.10

Section 4 : Start Hold

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
2200.0	28.92	225.19	2147.3	-242.9	-244.6	344.7	0.00	0.00	0.00	0.00
2300.0	28.92	225.19	2234.8	-277.0	-278.9	393.1	0.00	0.00	0.00	0.00
2400.0	28.92	225.19	2322.3	-311.1	-313.2	441.4	0.00	0.00	0.00	0.00
2500.0	28.92	225.19	2409.9	-345.2	-347.5	489.8	0.00	0.00	0.00	0.00
2600.0	28.92	225.19	2497.4	-379.2	-381.8	538.2	0.00	0.00	0.00	0.00
2603.0	28.92	225.19	2500.0	-380.3	-382.8	539.6	0.00	0.00	0.00	0.00
2700.0	28.92	225.19	2584.9	-413.3	-416.1	586.5	0.00	0.00	0.00	0.00
2800.0	28.92	225.19	2672.4	-447.4	-450.4	634.9	0.00	0.00	0.00	0.00
2900.0	28.92	225.19	2760.0	-481.5	-484.8	683.2	0.00	0.00	0.00	0.00
3000.0	28.92	225.19	2847.5	-515.6	-519.1	731.6	0.00	0.00	0.00	0.00
3100.0	28.92	225.19	2935.0	-549.7	-553.4	780.0	0.00	0.00	0.00	0.00
3200.0	28.92	225.19	3022.6	-583.7	-587.7	828.3	0.00	0.00	0.00	0.00
3300.0	28.92	225.19	3110.1	-617.8	-622.0	876.7	0.00	0.00	0.00	0.00
3400.0	28.92	225.19	3197.6	-651.9	-656.3	925.0	0.00	0.00	0.00	0.00
3500.0	28.92	225.19	3285.1	-686.0	-690.6	973.4	0.00	0.00	0.00	0.00
3600.0	28.92	225.19	3372.7	-720.1	-724.9	1021.8	0.00	0.00	0.00	0.00
3700.0	28.92	225.19	3460.2	-754.1	-759.2	1070.1	0.00	0.00	0.00	0.00
3800.0	28.92	225.19	3547.7	-788.2	-793.6	1118.5	0.00	0.00	0.00	0.00
3900.0	28.92	225.19	3635.3	-822.3	-827.9	1166.8	0.00	0.00	0.00	0.00
4000.0	28.92	225.19	3722.8	-856.4	-862.2	1215.2	0.00	0.00	0.00	0.00
4100.0	28.92	225.19	3810.3	-890.5	-896.5	1263.6	0.00	0.00	0.00	0.00
4200.0	28.92	225.19	3897.8	-924.5	-930.8	1311.9	0.00	0.00	0.00	0.00
4300.0	28.92	225.19	3985.4	-958.6	-965.1	1360.3	0.00	0.00	0.00	0.00
4400.0	28.92	225.19	4072.9	-992.7	-999.4	1408.7	0.00	0.00	0.00	0.00
4500.0	28.92	225.19	4160.4	-1026.8	-1033.7	1457.0	0.00	0.00	0.00	0.00
4600.0	28.92	225.19	4248.0	-1060.9	-1068.1	1505.4	0.00	0.00	0.00	0.00
4700.0	28.92	225.19	4335.5	-1094.9	-1102.4	1553.7	0.00	0.00	0.00	0.00
4800.0	28.92	225.19	4423.0	-1129.0	-1136.7	1602.1	0.00	0.00	0.00	0.00
4900.0	28.92	225.19	4510.5	-1163.1	-1171.0	1650.5	0.00	0.00	0.00	0.00
5000.0	28.92	225.19	4598.1	-1197.2	-1205.3	1698.8	0.00	0.00	0.00	0.00
5100.0	28.92	225.19	4685.6	-1231.3	-1239.6	1747.2	0.00	0.00	0.00	0.00
5200.0	28.92	225.19	4773.1	-1265.3	-1273.9	1795.5	0.00	0.00	0.00	0.00
5300.0	28.92	225.19	4860.7	-1299.4	-1308.2	1843.9	0.00	0.00	0.00	0.00
5400.0	28.92	225.19	4948.2	-1333.5	-1342.6	1892.3	0.00	0.00	0.00	0.00
5500.0	28.92	225.19	5035.7	-1367.6	-1376.9	1940.6	0.00	0.00	0.00	0.00
5600.0	28.92	225.19	5123.2	-1401.7	-1411.2	1989.0	0.00	0.00	0.00	0.00
5700.0	28.92	225.19	5210.8	-1435.7	-1445.5	2037.3	0.00	0.00	0.00	0.00
5800.0	28.92	225.19	5298.3	-1469.8	-1479.8	2085.7	0.00	0.00	0.00	0.00
5882.7	28.92	225.19	5370.7	-1498.0	-1508.2	2125.7	0.00	0.00	0.00	0.00

Section 5 : Start Drop -3.00

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
5900.0	28.40	225.19	5385.9	-1503.9	-1514.1	2134.0	3.00	-3.00	0.00	-180.00
6000.0	25.40	225.19	5475.0	-1535.7	-1546.2	2179.2	3.00	-3.00	0.00	180.00
6027.5	24.58	225.19	5500.0	-1543.9	-1554.4	2190.9	3.00	-3.00	0.00	180.00
6031.9	24.44	225.19	5504.0	-1545.2	-1555.7	2192.7	3.00	-3.00	0.00	180.00
6100.0	22.40	225.19	5566.4	-1564.3	-1574.9	2219.8	3.00	-3.00	0.00	-180.00
6200.0	19.40	225.19	5659.9	-1589.4	-1600.2	2255.4	3.00	-3.00	0.00	180.00
6300.0	16.40	225.19	5755.0	-1611.1	-1622.0	2286.2	3.00	-3.00	0.00	180.00
6346.7	15.00	225.19	5800.0	-1620.0	-1631.0	2298.8	3.00	-3.00	0.00	180.00

Weatherford Directional Services

Planning Report

Company: Wolverine Gas & Oil Co of Utah
Field: Sevier County, Utah
Site: Pad A-2
Well: 17-3
Wellpath: 1

Date: 10/21/2004
Co-ordinate(NE) Reference: Well: 17-3, True North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,225.19Azi)
Plan: 17-3

Page: 3

Section 5 : Start Drop -3.00

MD	Incl	Azim	TVD	+N/-S	+E/-W	VS	DLS	Build	Turn	TFO

Section 6 : Start Hold

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
6400.0	15.00	225.19	5851.4	-1629.7	-1640.8	2312.6	0.00	0.00	0.00	0.00
6500.0	15.00	225.19	5948.0	-1648.0	-1659.1	2338.5	0.00	0.00	0.00	0.00
6600.0	15.00	225.19	6044.6	-1666.2	-1677.5	2364.4	0.00	0.00	0.00	0.00
6700.0	15.00	225.19	6141.2	-1684.4	-1695.9	2390.2	0.00	0.00	0.00	0.00
6800.0	15.00	225.19	6237.8	-1702.7	-1714.2	2416.1	0.00	0.00	0.00	0.00
6900.0	15.00	225.19	6334.4	-1720.9	-1732.6	2442.0	0.00	0.00	0.00	0.00
7000.0	15.00	225.19	6431.0	-1739.1	-1751.0	2467.9	0.00	0.00	0.00	0.00
7100.0	15.00	225.19	6527.6	-1757.4	-1769.3	2493.8	0.00	0.00	0.00	0.00
7123.2	15.00	225.19	6550.0	-1761.6	-1773.6	2499.8	0.00	0.00	0.00	0.00

Targets

Name	Description Dip. Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	← Latitude → Deg Min Sec	← Longitude → Deg Min Sec
NVJ01 1980' FS & 660' FW -Rectangle (400x400) -Plan hit target		5800.0	-1620.0	-1631.0	170578.30	1874698.64	38 48 2.877 N	111 56 22.614 W

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
80.0	80.0	20.000	26.000	20"
600.1	600.0	16.000	17.500	16"
2603.0	2500.0	13.375	17.500	13 3/8"
6027.5	5500.0	9.625	12.250	9 5/8"
7123.2	6550.0	5.500	8.750	5 1/2"

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
6031.9	5504.0	Twin Creek		0.00	0.00
6346.7	5800.0	NVJ01		0.00	0.00

BOND STATEMENT

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Wolverine Gas and Oil Company of Utah, LLC with their Bond, filed with Bureau of Land Management in the amount of \$25,000.

The Bond Number is WY3329

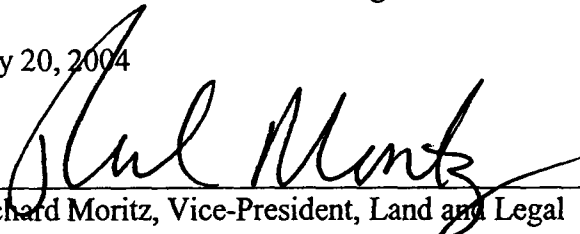
OPERATOR'S REPRESENTATIVE AND CERTIFICATIONS

The responsible field representative for the Wolverine Federal #17-3, on behalf of Wolverine Gas and Oil Company of Utah, LLC, is Steve Hash, PE, available via Wolverine Gas and Oil Company of Utah, LLC, One Riverfront Plaza, 55 Campau NW, Grand Rapids, MI 49503. (616) 458-1150.

I hereby certify that I, or persons under my direct supervision, have inspected the drill site and access route; that I am familiar with the conditions that currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with operations proposed herein will be performed by Wolverine Gas and Oil Company of Utah, LLC and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Date: July 20, 2004

Name and Title:


Richard Moritz, Vice-President, Land and Legal

BLM Bond No. WY3329OPERATOR RIDER

This rider is being submitted to comply with 43 CFR 3104.2 which states "... The operator on the ground shall be covered by a bond in his/her own name as principal, or a bond in the name of the lessee or sublessee, provided that a consent of the surety, or the obligor in the case of a personal bond, to include the operator under the coverage of the bond is furnished to the Bureau of- fice maintaining the bond."

The obligor hereby agrees to extend the coverage of their bond to include liabilities for operations conducted by Wolverine Gas and Oil Company of Utah, LLC and Wolverine Gas and Oil Company of Wyoming, LLC on Federal oil and gas leases.

Coverage includes the performance of all lease obligations, both past and future, including the responsibility to properly plug and abandon any and all wells, including related surface restoration, and to pay any outstanding rentals or royalties due.

This coverage of operations shall continue whether or not the lease subsequently expires, terminates, is canceled, or relinquished; provided, however, that this rider shall not act to increase the actual cumulative or potential liability of the obligor above the face amount of the bond.

Executed this 3rd day of March, 2004.

Witness:

Evelyn Telgen
Evelyn Telgen

One Riverfront Plaza, 55 Campau NW
Grand Rapids, MI 49503-2616
Address of witness

Wolverine Gas and Oil Corporation
Obligor

Gary R. Blecker
For Obligor: Gary R. Blecker
Vice President and COO

One Riverfront Plaza, 55 Campau NW
Grand Rapids, MI 49503-2616
Obligor's address

Addendum to the Application for Permit to Drill – Wolverine Federal #17-3 well

Section III. G. 3, Form 3160-3

- c. Rotary drilling tools
- d. New casing

Section III. G. 4, a., Drilling Plan

- (2) Arapien - none
- Twin Creek - oil/gas
- Navajo 1 - oil/gas
- (3) Pressure Control schematic – see attached schematic
- (4) Design factors for each casing string – see attached Casing Mechanical Properties & Design

PRESSURE CONTROL SYSTEM SCHEMATIC

By
EXACT Engineering, Inc
Tulsa, OK (918) 599-9400

Operator:
Wolverine Gas & Oil Co., Tulsa, LLC

Well name and number
Wolverine Federal 17-3

Max. anticipated surface pressure 3000 psi

Annular B.O.P. 11", 3000 W.P.

B.O.P. 11" Rams 4-1/2", 3000 W.P.
(Pipe/Blind)

Check Valve 2-1/16", 3000 W.P.

Valve 3", 3000 W.P.



Spool 3", 3000 W.P.

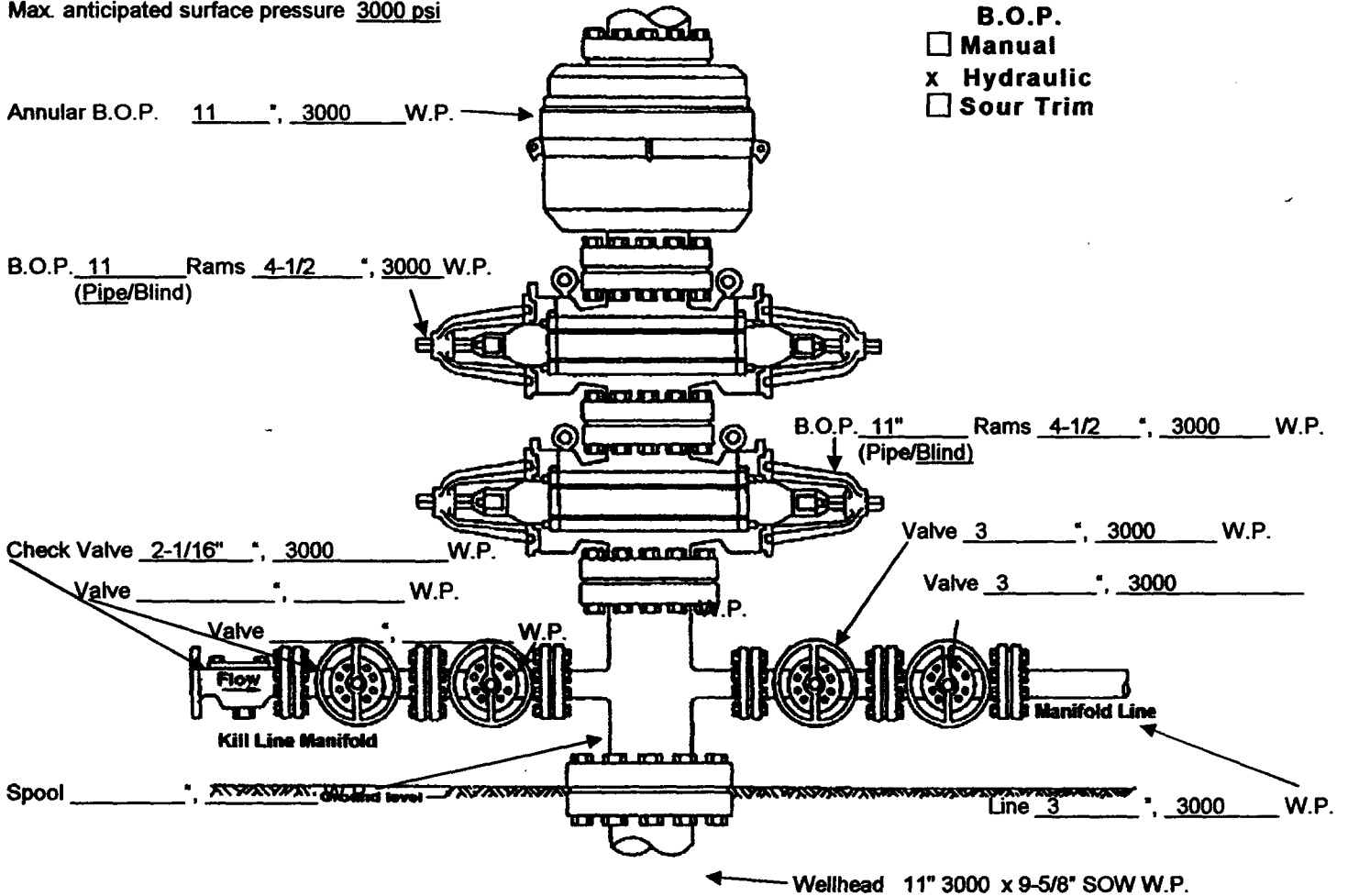
B.O.P. 11" Rams 4-1/2", 3000 W.P.
(Pipe/Blind)

Valve 3", 3000 W.P.

Valve 3", 3000

Wellhead 11" 3000 x 9-5/8" SOW W.P.

B.O.P.
☐ Manual
☒ Hydraulic
☐ Sour Trim



Operator: Wolverine Gas & Oil Co. of Utah, LLC
Well: Wolverine Federal 17-3
 Sevier Co., UT

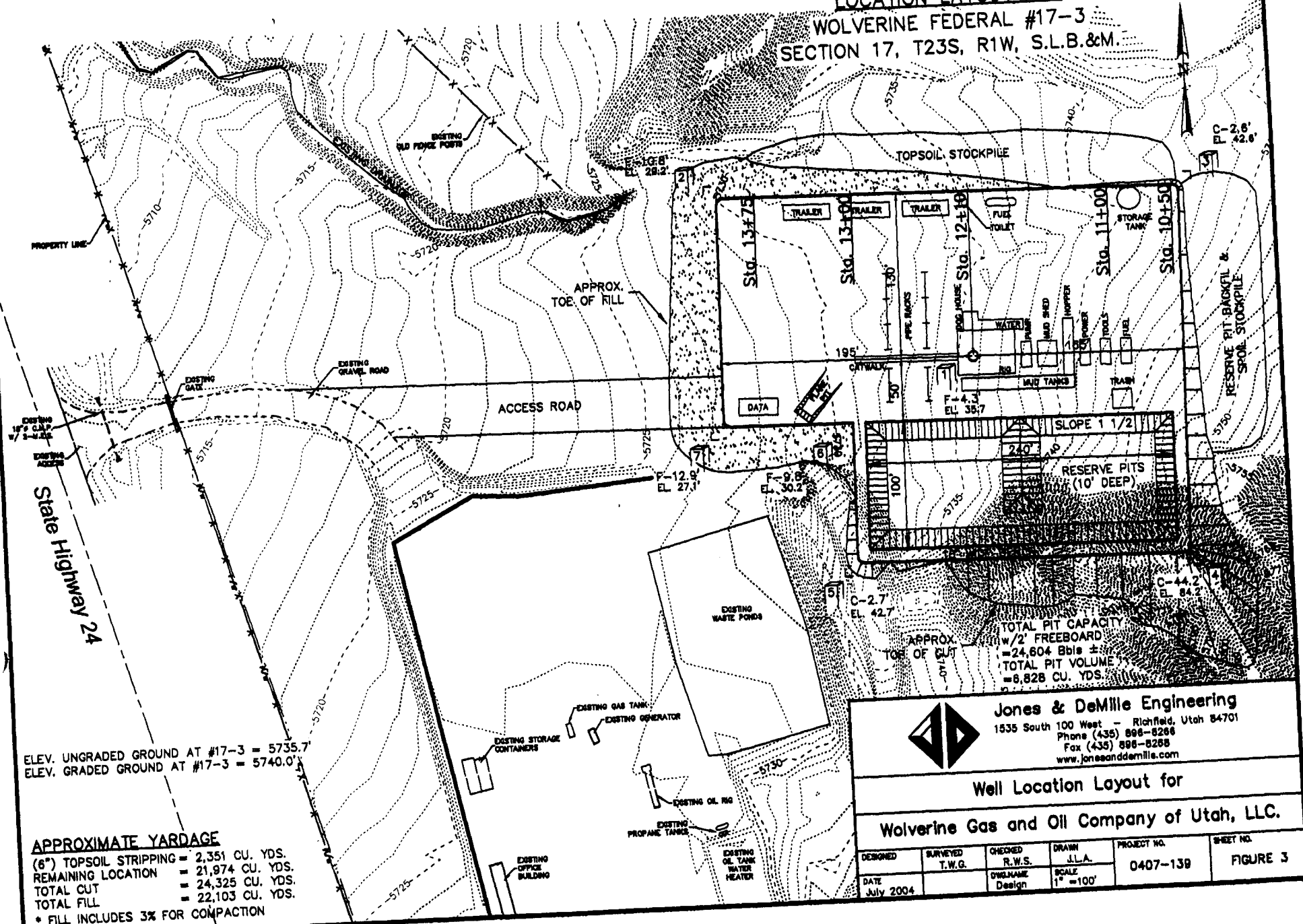
Casing Mechanical Properties & Design:

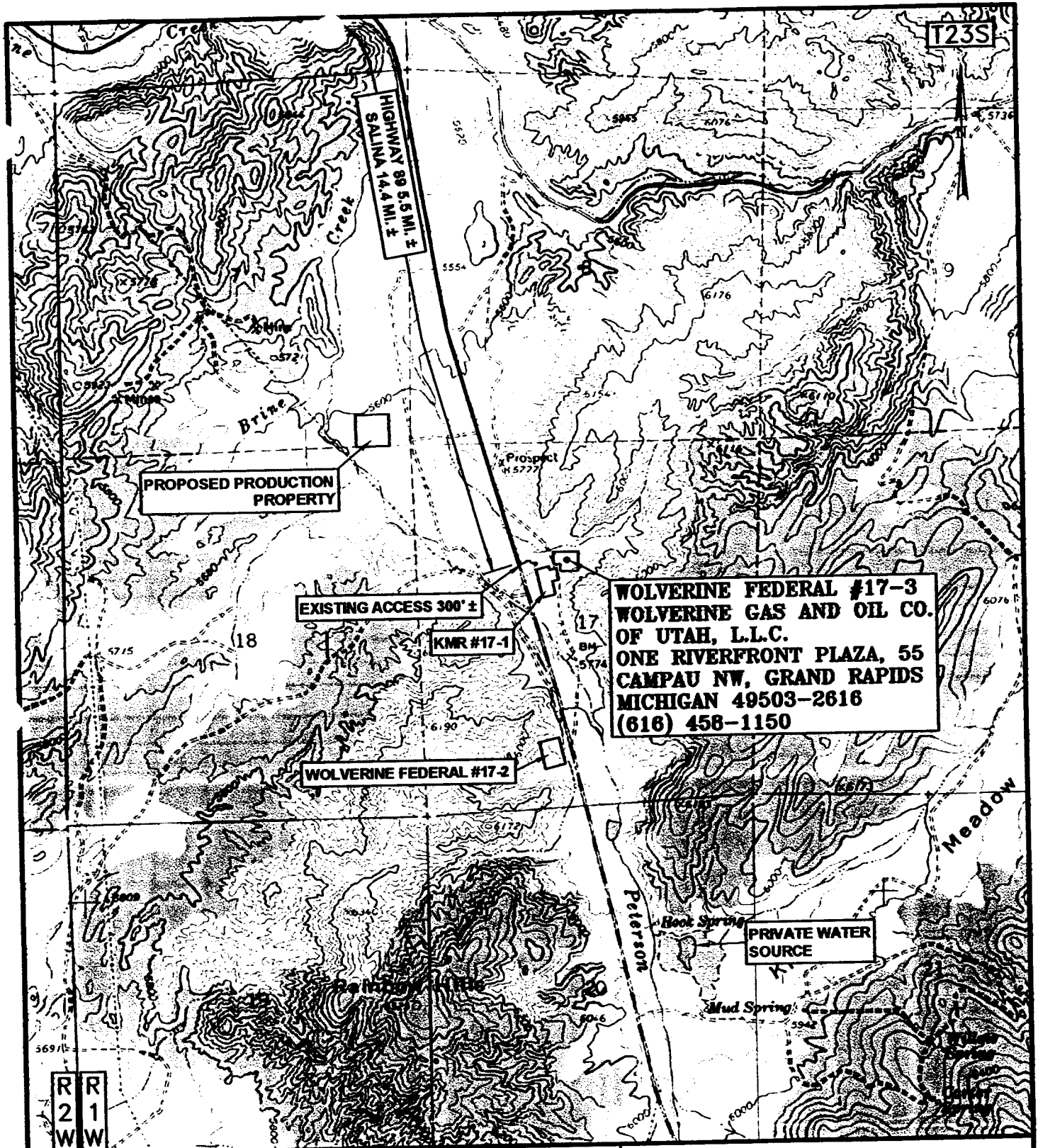
	Surface	Intermediate	Production
Casing size	9-5/8"		5-1/2"
Casing grade	J-55		N-80
Weight of pipe, #/ft	36.00		17.00
Setting Depth (TVD)	1500		6550
Setting Depth (MD)	1506		7102
Max mud weight - inside	10.20		9.40
Max mud weight - outside	10.20		9.40
Desired cement top	surface		1000
Hydrostatic inside (dry outside), psi	796		3202
Minimum Internal Yield, psi	3520		7740
Burst safety factor	4.4		2.4
Hydrostatic outside (dry inside), psi	796		3202
Collapse Resistance, psi	2020		6280
Collapse safety Factor	2.5		2.0
Weight in air, lbs.	54,216		120,734
Body Yield, lbs.	564,000		397,000
Joint Strength, lbs	423,000		348,000
Ratio - Weight/Body Yield	0.1		0.3
Tension Safety Factor	7.8		2.9

Casing strings will be pressure tested to 0.22 psi/ft of casing string length or 1500 psig, whichever is greater (not to exceed 70% of the internal yield of the casing), after cementing and prior to drilling out from under the shoe.

A pressure integrity test will be performed at each casing shoe. The formation at the shoe will be tested to a minimum of the mud weight equivalent anticipated to control formation pressure to the next casing depth. This test will be performed before drilling more than 20 ft of new hole

WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC.
LOCATION LAYOUT FOR
WOLVERINE FEDERAL #17-3
SECTION 17, T23S, R1W, S.L.B.&M.





Jones & DeMille Engineering
 1535 South 100 West — Richfield, Utah 84701
 (435) 896-8266 Phone
 (435) 896-8268 Fax
www.jonesanddemille.com



October 27, 2004

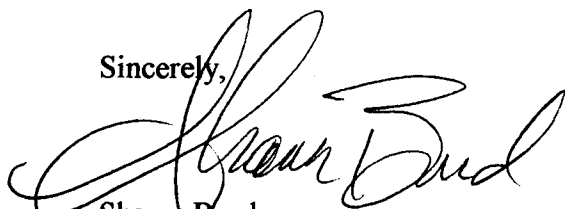
Utah Division of Oil, Gas & Mining
c/o Diana Whitney
1594 West North Temple, Suite 1210
Salt Lake City, Utah 84114-5801

Dear Diana:

Please find the enclosed APD, MSUP and drilling prognosis for the Wolverine Federal #17-3. We are completing the drilling prognosis and directional drawings for the Wolverine Federal #17-4, 17-5 and the Wolverine State #16-1. As soon as I get this information I will immediately send it to your attention. Thanks for your patience with this matter.

If you have any questions on this matter, please contact me at (435) 896-1943, cell (435) 979-4689.

Sincerely,



Shawn Burd

RECEIVED

OCT 28 2004

DIV. OF OIL, GAS & MINING

WESTERN LAND SERVICES - UTAH

310 South 100 East • Richfield, UT 84701 • Phone: (435) 896-1943 • Fax: (435) 893-2134

Web: www.westernls.com

001

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐
(highlight changes)

APPLICATION FOR PERMIT TO DRILL				5. MINERAL LEASE NO: UTU-73528	6. SURFACE: Fee
1A. TYPE OF WORK: DRILL <input checked="" type="checkbox"/> REENTER <input type="checkbox"/> DEEPEN <input type="checkbox"/>				7. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
B. TYPE OF WELL: OIL <input checked="" type="checkbox"/> GAS <input type="checkbox"/> OTHER _____ SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>				8. UNIT or CA AGREEMENT NAME: Wolverine Fed. Exploraton Unit	
2. NAME OF OPERATOR: Wolverine Gas and Oil Company of Utah, LLC				9. WELL NAME and NUMBER: Wolverine Federal # 17-3	
3. ADDRESS OF OPERATOR: One Riverfront Plaza CITY Grand Rapids STATE MI ZIP 49503				10. FIELD AND POOL, OR WILDCAT: Wildcat	
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: 1680' FNL & 2291' FWL-T23S,R1W,Sec17 AT PROPOSED PRODUCING ZONE: 1980 FSL & 660' FWL-T23S,R1W,Sec17				11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWSW 17 23S 1W S	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: 3.5 miles South of Sigurd				12. COUNTY: Sevier	13. STATE: UTAH
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET) appr. 200'		16. NUMBER OF ACRES IN LEASE: 8236 ac		17. NUMBER OF ACRES ASSIGNED TO THIS WELL: 40	
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET) appr. 600'		19. PROPOSED DEPTH: 7,100		20. BOND DESCRIPTION: BLM # WY 3329	
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): 5736 - GR		22. APPROXIMATE DATE WORK WILL START: 11/15/2004		23. ESTIMATED DURATION: 40 days	

24. **PROPOSED CASING AND CEMENTING PROGRAM**

SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT	SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT
20	14	80	Conductor
12 1/2	9 5/8 36 ppf J55 STC	1,510	lead:c,360sx,1.78, 12.8/tail:g, 280sx, 1.20, 15.6
8 3/4	5 1/2 17 ppf L80 LTC	7,100	lead:Poz, 750sx, 1.76, 13.0/tail:Poz, 350sx, 1.49, 13.4

25. **ATTACHMENTS**

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:

- ☒ WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER
☐ EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER

- ☒ COMPLETE DRILLING PLAN
☐ FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER

NAME (PLEASE PRINT) **Shawn Burd**TITLE **Authorized Agent**

SIGNATURE

DATE **10/19/2004**

(This space for State use only)

API NUMBER ASSIGNED: **43-041-30036**

APPROVED BY

**Approved by the
Utah Division of
Oil, Gas and Mining**

Date: **10-28-04**By: **[Signature]**

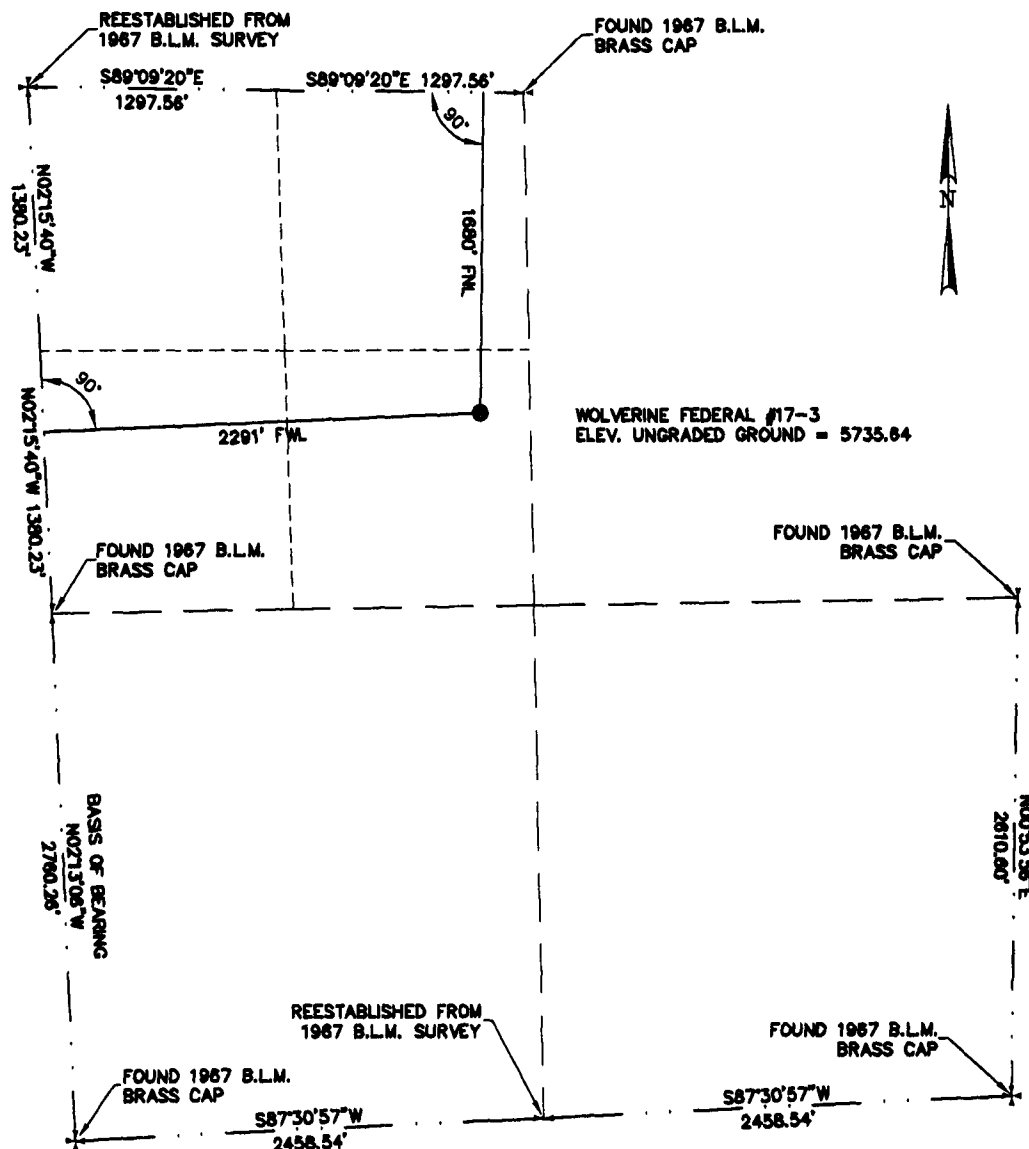
(11/2001)

(See Instructions on Reverse Side)

RECEIVED**OCT 28 2004****DIV. OF OIL, GAS & MINING**

Surf 418981x 38.805535 BHL 418531x
 4295402Y - 111-938062 4294834Y
 38.80041
 - 111.93829

Section 17, T.23 S., R.1 W., S.L.B. & M.



BASIS OF BEARINGS

BASIS OF BEARING USED WAS N02°13'06\"W BETWEEN THE SOUTHWEST CORNER AND THE WEST QUARTER CORNER OF SECTION 17, T.23 S., R.1 W., S.L.B. & M.

LATITUDE = 38°48'18.901\" (38.805250278)
LONGITUDE = -111°56'02.015\" (111.933893056)

PROJECT

Wolverine Gas & Oil Company of Utah, LLC.

WELL LOCATION, LOCATED AS SHOWN IN THE SE 1/4 OF THE
NW 1/4 OF SECTION 17, T.23 S., R.1 W., S.L.B. & M.
SEVIER COUNTY, UTAH

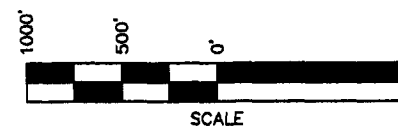
LEGEND

- + = SECTION CORNERS LOCATED
- = QUARTER SECTION CORNERS LOCATED
- = PROPOSED WELL HEAD

NOTE: THE PURPOSE OF THIS SURVEY WAS TO PLAT
THE WOLVERINE FEDERAL #17-3 LOCATION.
LOCATED IN THE SE 1/4 OF THE NW 1/4
OF SECTION 17, T.23 S., R.1 W., S.L.B. & M.
SEVIER COUNTY.

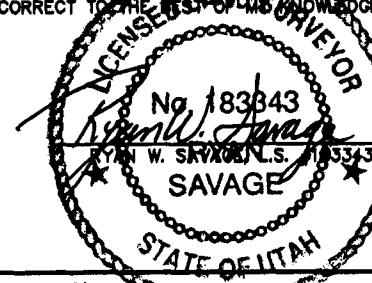
BASIS OF ELEVATION

ELEVATION BASED ON U.S.G.S. BENCH MARK LOCATED IN
THE SW 1/4 OF SECTION 17, T.23 S., R.1 W., S.L.B. & M.



CERTIFICATE

THIS IS TO CERTIFY THAT THIS PLAT WAS PREPARED FROM
FIELD NOTES OF AGEN SURVEYS MADE BY ME OR UNDER
MY SUPERVISION AND THAT THE SAME ARE TRUE AND
CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



10/01/04
DATE



Jones & Demille Engineering
1535 South 100 West - Richfield, Utah 84701
Phone (435) 896-8286
Fax (435) 896-8288
www.jonesanddemille.com

Well Location Plat for

Wolverine Gas & Oil Company of Utah, LLC.

DESIGNED	SURVEYED	CHECKED	DRAWN	PROJECT NO.	SHEET NO.
	T.W.G.	R.W.S.	K.B.B.		
DATE		DWG NAME	SCALE		
Sept. 2004		Wells	1\" = 1000'	0406-160	1

008

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 10/28/2004

API NO. ASSIGNED: 43-041-30036

WELL NAME: WOLVERINE FED 17-3

OPERATOR: WOLVERINE GAS & OIL CO (N1655)

CONTACT: RICHARD MORITZ

PHONE NUMBER: 616-458-1150

PROPOSED LOCATION:

SENW 17 230S 010W

SURFACE: 1680 FNL 2291 FWL

NEW BOTTOM: 1980 FSL 0660 FWL

SEVIER

WILDCAT (1)

LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU-73528

SURFACE OWNER: 4 - Fee

PROPOSED FORMATION: NAVA

COALBED METHANE WELL? NO

INSPECT LOCATN BY: / /

Tech Review

Initials

Date

Engineering

Geology

Surface

LATITUDE: 38.80547

LONGITUDE: -111.9333

RECEIVED AND/OR REVIEWED:

☒ Plat☒ Bond: Fed[1] Ind[] Sta[] Fee[]
(No. WY 3329)☒ Potash (Y/N)☒ Oil Shale 190-5 (B) or 190-3 or 190-13☒ Water Permit

(No. 63-2529)

☒ RDCC Review (Y/N)

(Date:)

☒ Fee Surf Agreement (Y/N)

* Surf owner is Wolverine

LOCATION AND SITING:

R649-2-3.

Unit WOLVERINE

R649-3-2. General

Siting: 460 From Qtr/Qtr & 920' Between Wells

R649-3-3. Exception

Drilling Unit

Board Cause No: _____

Eff Date: _____

Siting: _____

☒ R649-3-11. Directional Drill

COMMENTS:

Needs Permit (9-7-04)

STIPULATIONS:

1- Federal Approval

2- Spacing Map

3- STATEMENT OF BASIS



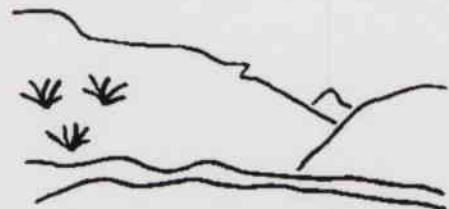
OPERATOR: WOLVERINE G&O CO (N1655)

SEC. 17 T.23S R.1W

FIELD: WILDCAT (001)

COUNTY: SEVIER

SPACING: R649-3-11 / DIRECTIONAL DRILLING



Utah Oil Gas and Mining

Wells

- ⬮ GAS INJECTION
- ⬮ GAS STORAGE
- ✕ LOCATION ABANDONED
- ⬮ NEW LOCATION
- ⬮ PLUGGED & ABANDONED
- ⬮ PRODUCING GAS
- ⬮ PRODUCING OIL
- ⬮ SHUT-IN GAS
- ⬮ SHUT-IN OIL
- ✕ TEMP. ABANDONED
- ⬮ TEST WELL
- ⬮ WATER INJECTION
- ⬮ WATER SUPPLY
- ⬮ WATER DISPOSAL

Units.shp

- ⬮ EXPLORATORY
- ⬮ GAS STORAGE
- ⬮ NF PP OIL
- ⬮ NF SECONDARY
- ⬮ PENDING
- ⬮ PI OIL
- ⬮ PP GAS
- ⬮ PP GEOTHERML
- ⬮ PP OIL
- ⬮ SECONDARY
- ⬮ TERMINATED

Fields.shp

- ⬮ ABANDONED
- ⬮ ACTIVE
- ⬮ COMBINED
- ⬮ INACTIVE
- ⬮ PROPOSED
- ⬮ STORAGE
- ⬮ TERMINATED



PREPARED BY: DIANA WHITNEY
DATE: 12-AUG-2004

ON-SITE PREDRILL EVALUATION
Division of Oil, Gas and Mining

OPERATOR: Wolverine Gas and Oil Company
WELL NAME & NUMBER: Wolverine Federal 17-3
API NUMBER: 43-041-30036
LEASE: Fed **FIELD/UNIT:** _____
LOCATION: 1/4, 1/4 SENW **Sec:** 17 **TWP:** 23S **RNG:** 1W 1736 FNL 2283 FWL
LEGAL WELL SITING: 460 F **SEC. LINE;** 460 F 1/4, 1/4 **LINE;** 920 F **ANOTHER WELL.**
GPS COORD (UTM): X= 428543 E; Y= 4295893 N **SURFACE OWNER:** Wolverine.

PARTICIPANTS

M. Jones (DOGM), Shaun Burd (Western Land Services), Ed Bonner (SITLA).

REGIONAL/LOCAL SETTING & TOPOGRAPHY

Proposed location is ~3.5 miles south of Sigurd, in Sevier County, Utah. Staked location lies east of Highway 24 on Wolverine Gas and Oil Company owned property. Steep hills surround the sagebrush dominated flat, from where the well is proposed to be drilled. Access to this well will be along existing Wolverine oil field roads from UDOT maintained roads. No new access road will be built for this location, as it will utilize existing access. The direct area drains to the northwest, into Brine Creek then further west eventually into the Sevier River, a year-round live water source ~2.5 miles northwest of the proposed location. Dry washes run throughout the area.

SURFACE USE PLAN

CURRENT SURFACE USE: Grazing and wildlife habitat.

PROPOSED SURFACE DISTURBANCE: 180' x 360' w/ 240' x 100' x 10' (excluded) pit.

LOCATION OF EXISTING WELLS WITHIN A 1 MILE RADIUS: 8 proposed, producing, and/or PA wells are within a 1 mile radius of the above proposed well.

LOCATION OF PRODUCTION FACILITIES AND PIPELINES: On location and along roadway to production facilities south of 17-1 location.

SOURCE OF CONSTRUCTION MATERIAL: Obtained locally and trucked to site.

ANCILLARY FACILITIES: None anticipated.

WILL DRILLING AT THIS LOCATION GENERATE PUBLIC INTEREST OR CONCERNS? (EXPLAIN): This well will be drilled on a pad consisting of 4 wells, all to be drilled directionally. The pad sits next to a recently drilled vertical well, Kings Meadow Ranches 17-1. Highway 24 runs past all of this activity, therefore any and all activity associated with these wells can be seen by the public, which may increase public interest and/or concern.

WASTE MANAGEMENT PLAN:

Portable chemical toilets will be emptied into the municipal waste treatment system; garbage cans on location will be emptied into centralized dumpsters, which will be emptied into an approved landfill. Drilling fluid, and completion/frac fluid will be removed from the pit upon completion of the well. Cuttings will be buried in the pit unless oil based mud is used. If oil based mud is used disposal of the cuttings should be discussed with the Division. Used oil from drilling operations and support will be hauled to a used oil recycling facility. Produced water will be disposed of at an approved facility.

ENVIRONMENTAL PARAMETERS

AFFECTED FLOODPLAINS AND/OR WETLANDS: Dry washes run throughout the immediate area of the proposed well location.

FLORA/FAUNA: Sagebrush, greasewood, winterfat, 4-wing salt brush, deer rodents, fowl.

SOIL TYPE AND CHARACTERISTICS: Rocky clay.

SURFACE FORMATION & CHARACTERISTICS: Arapien Shale

EROSION/SEDIMENTATION/STABILITY: Erosive upon disturbance.

PALEONTOLOGICAL POTENTIAL: None observed.

RESERVE PIT

CHARACTERISTICS: Dugout earthen, 240'x100'x10', exterior to location.

LINER REQUIREMENTS (Site Ranking Form attached): Liner required.

SURFACE RESTORATION/RECLAMATION PLAN

As per Wolverine.

SURFACE AGREEMENT: Wolverine owns the surface.

CULTURAL RESOURCES/ARCHAEOLOGY: Mountain States Archaeology.

OTHER OBSERVATIONS/COMMENTS

Some alterations are planned to a dry wash on the north side of the location. The appropriate permits with the Division of Water Rights will be obtained prior to any construction.

ATTACHMENTS

Photos of this location were taken and placed on file.

Mark L. Jones
DOGM REPRESENTATIVE

September 7, 2004 / 3:00 pm
DATE/TIME

**Evaluation Ranking Criteria and Ranking Score
For Reserve and Onsite Pit Liner Requirements**

<u>Site-Specific Factors</u>	<u>Ranking</u>	<u>Site Ranking</u>
Distance to Groundwater (feet)		
>200	0	
100 to 200	5	
75 to 100	10	
25 to 75	15	
<25 or recharge area	20	<u>0</u>
Distance to Surf. Water (feet)		
>1000	0	
300 to 1000	2	
200 to 300	10	
100 to 200	15	
< 100	20	<u>0</u>
Distance to Nearest Municipal Well (feet)		
>5280	0	
1320 to 5280	5	
500 to 1320	10	
<500	20	<u>0</u>
Distance to Other Wells (feet)		
>1320	0	
300 to 1320	10	
<300	20	<u>0</u>
Native Soil Type		
Low permeability	0	
Mod. permeability	10	
High permeability	20	<u>10</u>
Fluid Type		
Air/mist	0	
Fresh Water	5	
TDS >5000 and <10000	10	
TDS >10000 or Oil Base Mud Fluid	15	
containing significant levels of hazardous constituents	20	<u>10</u>
Drill Cuttings		
Normal Rock	0	
Salt or detrimental	10	<u>0</u>
Annual Precipitation (inches)		
<10	0	
10 to 20	5	
>20	10	<u>5</u>
Affected Populations		
<10	0	
10 to 30	6	
30 to 50	8	
>50	10	<u>0</u>
Presence of Nearby Utility Conduits		
Not Present	0	
Unknown	10	
Present	15	<u>10</u>

Final Score 35 (Level I Sensitivity)

Sensitivity Level I = 20 or more; total containment is required, consider criteria for excluding pit use.

Sensitivity Level II = 15-19; lining is discretionary.

Sensitivity Level III = below 15; no specific lining is required.

**DIVISION OF OIL, GAS AND MINING
APPLICATION FOR PERMIT TO DRILL
STATEMENT OF BASIS**

OPERATOR: Wolverine Gas and Oil Company
WELL NAME & NUMBER: Wolverine Federal 17-3
API NUMBER: 43-041-30036
LOCATION: 1/4, 1/4 SENW Sec: 17 TWP: 23 S RNG: 1 W 1736 FNL 2283 FWL

Geology/Ground Water:

This location is placed in the High Plateaus section of the Colorado Plateau physiographic province in western central Utah. Some people have characterized this area as being in the Basin and Range - Colorado Plateau transition zone. The location is on fee acreage a few miles east of the Sevier River, in the Peterson Creek drainage, a tributary of Brine Creek, which subsequently flows into the Sevier River. The rancher heavily allocates water rights for the local springs, which arise from the volcanic rocks just to the east, for agriculture.

The well will likely spud into a thin alluvium covering the evaporite-rich Jurassic age Arapien Shale. The proposal calls for a saturated salt mud system from below the surface casing into the Navajo Sandstone. The quality of any surface water that manages to escape upstream allocation is diminished as it flows past the location and into Brine Creek, owing to the evaporite minerals in the Arapien Shale. Any water contained in the Arapien Shale is also likely to be of poor quality. A Division of Water Rights publication notes that aquifers in close proximity to the Arapien Shale are also likely to contain ground water with high TDS levels. Inasmuch as there do not appear to be any intervening aquifers documented in this area, which lie between the Arapien Shale and the underlying Navajo Sandstone, it is unlikely that any high quality ground water will be encountered.

At this location it is unlikely that any high quality ground water resource will be encountered in the Navajo, at that depth, in any strata drilled below the Navajo or at all. The proposed casing, cementing and drilling fluid program should be sufficient to control and isolate the poor quality ground waters expected to be encountered in a well at this location. Two surface water rights, a point to point right and an underground water right are found within a mile to the east. The underground water right is for a 156' deep well more than half a mile east.

Reviewer: Christopher J. Kierst **Date:** October 19, 2004

Surface:

Proposed location is ~3.5 miles south of Sigurd, in Sevier County, Utah. Staked location lies east of Highway 24 on Wolverine Gas and Oil Company owned property. Steep hills surround the sagebrush dominated flat from which the well is proposed to be drilled. Access to this well will be along existing Wolverine oil field roads from UDOT maintained roads. No new access road will be built for this location, as it will utilize existing access. The direct area drains to the northwest, into Brine Creek then further west eventually into the Sevier River, a year-round live water source ~2.5 miles northwest of the proposed location. Dry washes run throughout the area. Some alterations are planned to a dry wash on the north side of the location. The appropriate permits with the Division of Water Rights will be obtained prior to any construction. Shaun Burd, Western Land Services, represented Wolverine Gas and Oil, while Ed Bonner was in attendance, representing the SITLA royalty interest. Sevier County was invited but chose not to attend this on-site evaluation.

Reviewer: Mark L. Jones **Date:** October 14, 2004

Conditions of Approval/Application for Permit to Drill:

1. A synthetic liner with a minimum thickness of 12 mills shall be properly installed and maintained in the reserve pit.
2. Diversion of drainages around the pad.
3. Berm the location.







State Online Services / Agency List / Business.utah.gov

Search Utah.gov

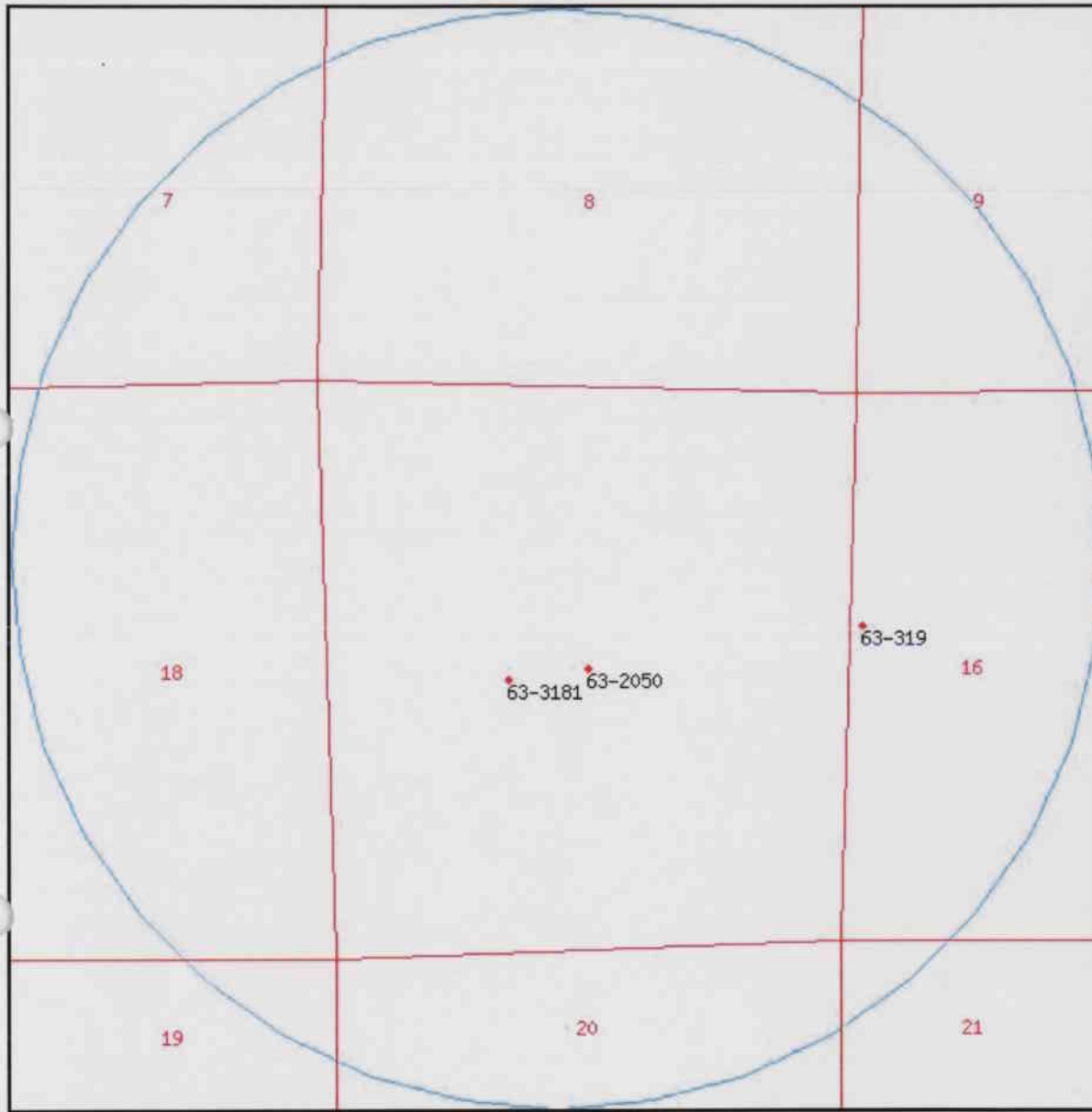
GO

UTAH DIVISION OF WATER RIGHTS

WRPLAT Program Output Listing

Version: 2004.03.26.00 Rundate: 10/20/2004 04:56 PM

Radius search of 5280 feet from a point S1736 E2283 from the NW corner, section 17, Township 23S, Range 1W, SL
p&m Criteria:wrtypes=W,C,E podtypes=all status=U,A,P usetypes=all



0 700 1400 2100 2800 ft

Water Rights

STATE OF UTAH – DIVISION OF WATER RIGHTS – DATA PRINT OUT for 63-319(A27813)

(WARNING: Water Rights makes NO claims as to the accuracy of this data.) RUN DATE: 10/20/2004 Page 1

WRNUM: 63-319 APPLICATION/CLAIM NO.: A27813 CERT. NO.:

OWNERSHIP*****

NAME: A. Bryant and J. Llewellyn Young
ADDR: Richfield UT 84701

LAND OWNED BY APPLICANT?

DATES, ETC.*****

FILED: 01/21/1956	PRIORITY: 01/21/1956	PUB BEGAN:	PUB ENDED:	NEWSPAPER:
ProtestEnd:	PROTESTED: [No]	HEARNG HLD:	SE ACTION: []	ActionDate:02/28/1957
EXTENSION:	ELEC/PROOF:[]	ELEC/PROOF:	CERT/WUC:	LAP, ETC: PROV LETTER:
RENOVATE:	RECON REQ:	TYPE: []		

PD Book No. Map:

Type of Right: Application to Appropriate Source of Info: Application to Appropriate Status: No Prf Req

LOCATION OF WATER RIGHT*****

FLOW: 0.015 cfs SOURCE: Underground Water Well

COUNTY: Sevier COMMON DESCRIPTION:

POINT OF DIVERSION -- UNDERGROUND:
(1) N 330 ft E 100 ft from W4 cor, Sec 16, T 23S, R 1W, SLBM
Comment:

USES OF WATER RIGHT*****

WATER RIGHT CLAIMS IN COMMON: 319

###STOCKWATERING: 250 Cattle or Equivalent Diversion Limit: PERIOD OF USE: 01/01 TO 12/31
*****END OF DATA*****



State of Utah

Department of
Natural ResourcesROBERT L. MORGAN
*Executive Director*Division of
Oil, Gas & MiningLOWELL P. BRAXTON
*Division Director*OLENE S. WALKER
*Governor*GAYLE F. McKEACHNIE
Lieutenant Governor

October 28, 2004

Wolverine Gas & Oil Company of Utah, LLC
One Riverfront Plaza
Grand Rapids, MI 49503Re: Wolverine Federal 17-3 Well, Surface Location 1680' FNL, 2291' FWL,
SE NW, Sec. 17, T. 23 South, R. 1 West, Bottom Location 1980' FSL,
660' FWL, NW SW, Sec. 17, T. 23 South, R. 1 West, Sevier County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. § 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-041-30036.

Sincerely,

John R. Baza
Associate Director

pab

Enclosures

cc: Sevier County Assessor
Bureau of Land Management, Moab District Office

Operator: Wolverine Gas & Oil Company of Utah, LLC
Well Name & Number Wolverine Federal 17-3
API Number: 43-041-30036
Lease: UTU-73528

Surface Location: SE NW **Sec.** 17 **T.** 23 South **R.** 1 West
Bottom Location: NW SW **Sec.** 17 **T.** 23 South **R.** 1 West

Conditions of Approval

1. General

Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

2. Notification Requirements

Notify the Division within 24 hours of spudding the well.

- Contact Carol Daniels at (801) 538-5284.

Notify the Division prior to commencing operations to plug and abandon the well.

- Contact Dan Jarvis at (801) 538-5338

3. Reporting Requirements

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

4. State approval of this well does not supersede the required federal approval, which must be obtained prior to drilling.

5. In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

6. Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis. (Copy Attached)

7. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.

DIVISION OF OIL, GAS AND MINING**SPUDDING INFORMATION**Name of Company: WOLVERINE GAS & OIL CO UTWell Name: WOLVERINE FED 17-3Api No: 43-041-30036 Lease Type: FEDERAL – FEE SURFSection 17 Township 23S Range 01W County SEVIERDrilling Contractor UNION DRILLING RIG # 111**SPUDDED:**Date 12/10/2004Time 6:30 AMHow DRY**Drilling will commence:** _____Reported by STEVE HASHTelephone # 1-918-599-9400Date 12/13/2004 Signed CHD

011

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

CONFIDENTIAL

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>Drilling Well</u>		5. LEASE DESIGNATION AND SERIAL NUMBER: FEE UTU-73528
2. NAME OF OPERATOR: Wolverine Gas and Oil of Utah, LLC		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
3. ADDRESS OF OPERATOR: 55 Campau, NW CITY Grand Rapids STATE MI ZIP 49203		7. UNIT or CA AGREEMENT NAME: Wolverine Fed Exploration Unit
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1680' FNL & 2291' FWL		8. WELL NAME and NUMBER: Wolverine Federal #17-3
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SENW 17 23S 1W		9. API NUMBER: 4304130036
COUNTY: <u>Sevier</u>		10. FIELD AND POOL, OR WILDCAT: Covenant Field
STATE: <u>UTAH</u>		

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: <u>12/10/2004</u>	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input checked="" type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion:	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

1. Revise surface location: move 58' west for best rig layout: move FROM 1680' FNL & 2291' FWL TO 1680' FNL & 2233' FWL

2. Revise casing program per attached drilling prognosis

PLEASE MAINTAIN THE ENCLOSED INFORMATION CONFIDENTIAL

Surf 38.805536
 418963X
 4295403Y 711.933269

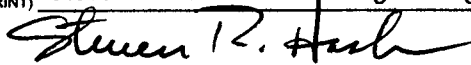
BHL
 418458X
 4294873Y
 38.800711
 711.939018

RECEIVED
 DEC 13 2004

DIV. OF OIL, GAS & MINING

NAME (PLEASE PRINT) Steven R. Hash - EXACT Engineering, Inc.

SIGNATURE



TITLE Consultant & Agent for Wolverine Gas & Oil Co Uta

DATE 12/9/2004

(This space for State use only)

COPY SENT TO OPERATOR
 Date: 12-21-04
 Initials: CHD

Accepted by the
 Utah Division of
 Oil, Gas and Mining

Federal Approval Of This
 Action Is Necessary

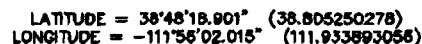
(5/2000)

(See Instructions on Reverse Side)

Date: 12/14/04

By: 

DESIGNED	SURVEYED T.W.G.	CHECKED R.W.S.	DRAWN K.D.B.	PROJECT NO. 0406-160	SHEET NO.
DATE Oct. 2004		ENGINEER Wells	SCALE 1" = 1000'		



CONFIDENTIAL

WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC

DRILLING PROGNOSIS

Wolverine Federal #17-3
NW SW SEC 17-T23S-R1W
SEVIER CO., UTAH

BRIEF DRILLING PLAN

Due to surface topography constraints, directionally drill a 7100' MD (6550'TVD) test of the Navajo 1 formation on a day work contract basis from Wolverine's present work area known as Drill Pad A-2 located in Sec 17 T23S – R01W, Sevier Co, UT. Please refer to the directional drilling plan attached for detailed hole angle, trajectory and target information. Deviation is the primary drilling concern in this area. No abnormal pressure or hydrogen sulfide gas is expected, however, an H2S detector will be utilized. The projected surface and bottomhole locations are to be as follows:

Surface Location: 1680' fnl & 2233' fwl of Sec 17 T23N – R01W
BHL @ top of NVJO1 (5800' TVD) 1980' fsl & 660' fwl of Sec 17 T23N – R01W

20" conductor casing will be cemented to surface at approximately 100-120 ft BGL. 16" surface casing will be set & cemented to surface in a 17-1/2" hole deviated to approximately 3 deg at +/-600' (+/-600' TVD). A 12-1/4" hole will then be drilled to +/- 6010' (5500' TVD) deviated to approximately 28 deg from vertical by 2000' maintaining tangent to TD of 6010. 9-5/8" intermediate casing will be set from surface to TD & cemented across the lowermost 2500'. An 8-3/4" hole will then be drilled to +/- 7100' (6550' TVD). 7" production casing will then be run from TD back to surface & cemented to approximately 300' into the 9-5/8" intermediate casing. In the event of lost circulation or other problems while drilling the 12-1/4" hole from 600' to 2700', the hole will be enlarged to 15" and a 13-3/8" casing string will be run from surface to TD (no deeper than 2700') and cemented into the surface casing. This is a contingency only.

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EMERGENCY NUMBERS

Sevier Valley Medical Center	(435)-896-8271
Medical Helicopter	(800)-453-0120
Sheriff Department	(435)-896-2600
Fire Department-Richfield, UT	(435)-896-5479
Bureau of Land Management (Richfield):	(435)-896-1500
Bureau of Land Management (Salt Lake City)	(801) 539-4045
Utah Division of Oil, Gas and Mining (Salt Lake City):	(801)-538-5340

United States Bureau of Land Management

Contact Al McKee (801) 539-4045 24 hrs prior to spudding

Utah Division of Oil, Gas and Mining

Contact Carol Daniels (801) 538-5284, 24 hrs prior to spudding

GENERAL INFORMATION

OBJECTIVE: Navajo 1 @ 5800' (TVD)	ELEVATION: 5740' GL (est)
PROJECTED TOTAL DEPTH:	7,150 MD; 6550' TVD
SURFACE LOCATION:	1680' FNL & 2233' FWL Section 17-23S-1W
COUNTY: Sevier	STATE: Utah
DIRECTIONS TO LOCATION:	From town of Sigurd, Utah go south approximately 3.5 miles on Hwy #24 to location on the left side of the road.

PROPOSED CASING PROGRAM:

Hole Size	Casing Size	Wt./Ft.	Grade	Joint	Measured Depth Set
	20"	.25 wall	X42	PE welded	100-120'
17-1/2"	16"	65#	H-40	BTC	0'-600'
*** 15"	13-3/8"	68#	J-55	BTC	0' - 2700'
12-1/4"	9-5/8"	47#	N-80	LTC	0'-6,010'
8-3/4"	7"	26#	N-80	LTC	0' - 7100'

*** contingency only – set only if hole conditions dictate

Hole Size	Casing Size	Drift ID, in.	OD of Couplings	Annular Volume in OH, cf/ft	Annular Volume in Csg, cf/ft	Capacity of casing, cf/ft
30"	20"	Conductor	na			
20"	16"	15.062	17.0	.7854	.7854	1.2476
*** 15"	13-3/8"	12.259	14.375	.2927	.2927	.8406
12 1/4"	9-5/8"	8.525	10.625	0.3127	0.4659	0.4340
8-3/4"	7"	6.151	7.656	0.2526	0.2691	0.1305

*** contingency only – set only if hole conditions dictate

GEOLOGIC INFORMATION:

Formation	Interval (TVD)	Interval (MD)	Lithology	Prod	Abnormal Psi
Arapien	Surf – 5504'	Surf – 6010'	sh, siltstone, salt, evaporites		
TwinCreek1	5504' - 5800'	6010' – 6325'	Carbonates		
Navajo 1	5800- 6350'	6325' – 6900'	Sandstone w/ minor shale	X	
Total Depth	6550'	7100'	Sandstone w/ minor shale		

CONSTRUCTION OF SURFACE LOCATION

360'x 180' Pad

150'x 100' x 10' Reserve Pit with a 12 mil synthetic liner

96" diameter tin horn cellar, 10' deep.

Flare pit a minimum of 100' from wellhead.

SURFACE HOLE: 0' to 600'

Directionally drill a 17-1/2" hole with a TCI rock bit, mud motor & MWD equipment to approximately 600' using fresh water and gel/lime sweeps when necessary (make hole to fit 16" casing). Loss circulation is not expected to be a problem in this interval. If losses do occur, begin pumping LCM sweeps. If loss circulation cannot be healed with ± 25 ppb LCM, consider dry drilling (no returns). Maintain hole direction to approximately 230 deg azimuth in keeping with the attached directional plan.

PRESSURE CONTROL & SAFETY EQUIPMENT FOR SURFACE HOLE

Bottom to Top

20" drilling nipple – returns to mud pits – no pressure control

MUD PROGRAM FOR SURFACE HOLE

<u>DEPTH</u>	<u>MUD WEIGHT</u>	<u>TYPE</u>	<u>VISC</u>	<u>PH</u>	<u>FLUID LOSS</u>
0 - 600'	8.4 – 8.9	FW/Gel/Lime	26-45	7-9	N/C

Note: Sweep hole every 100 – 200 feet or as needed for hole cleaning. Control the pH with Lime & Caustic to aid in gel flocculation for better carrying capacity.

CASING PROGRAM FOR SURFACE HOLE

<u>DEPTH</u>	<u>SIZE</u>	<u>LENGTH</u>	<u>WT</u>	<u>GRADE</u>	<u>THREAD</u>	<u>REMARKS</u>
0 - 600'	16"	600'	65#	H-40	BT&C	

Casing Running Sequence:

guide shoe

1 jt of 16" 65# H-40 BT&C

Float collar

Balance of 16" 65# H-40 BT&C

Centralizers as reqd.

RU cement co., hold safety meeting, test lines, cement 16" casing per cement company recommendation. Displace with fresh water or mud if used.

CEMENTING PROGRAM FOR SURFACE HOLE**Lead:**

855 sx Premium Class G
 2% calcium chloride
 0.25 lb/sx flocele

Mixed at: 15.8 ppg
 Yield: 1.17 ft³/sx
 Water: 5.01 gal/sx

MUST CIRCULATE CEMENT TO SURFACE If the cement does **not** circulate to surface contact the UDOGM office for further instructions and remedial actions.

WOC A TOTAL OF 24 HOURS:

Wait 4 hours with the hydrostatic pressure of the displacement fluid in place, then cut off conductor and weld on a 16-3/4" 3M x 16" SOW casing head. NU 20" 2M diverter w/ 6-5/8" HCR valve rigged to mud/gas separator, mud tanks and flare pit.

PROTECTIVE CASING HOLE: 600' to 6010'

Directionally drill a 12-1/4" hole with a PDC and/or a TCI rock bit, mud motor & MWD equipment to approximately 6010' MD using a low solids – non dispersed system converting to salt mud in the lower portion. Loss circulation may be a problem in this interval. If losses do occur, begin pumping LCM sweeps. If loss circulation cannot be healed with ±25 ppb LCM, consider dry drilling (no returns). If conditions are severe consider implementing a contingency for casing the problem zone with 13-3/8" csg as outlined above. Build hole angle to approximately 22 degrees by 2000' then maintain hole angle and direction to ICP in keeping with the attached directional plan.

PRESSURE CONTROL AND SAFETY EQUIPMENT FOR PROTECTIVE CASING STRING**Bottom to Top**

16-3/4" 3M x 16" SOW csg head.
 16-3/4" 3M x 20" 2M drilling spool
 20" 2M x 20" 2M x (2) 7-1/16" 2m side outlets
 one outlet 7-1/16" HCR valve w/ 6" blooie line to mud separator & pit
 one outlet blank
 20" 2M flanged btm drilling nipple w/ fillup line

Upper kelly cock valves with handles available
 Safety valves and subs to fit all drill string connections in use
 Inside BOP or float sub available

Testing Procedure:

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Annular Preventer & HCR Valve

The annular preventer will be pressure tested to 1000 psi for a period of ten minutes or until provisions of the test are met, whichever is longer. At a minimum, the pressure test will be performed:

- 1) When the annular is initially installed
- 2) Whenever any seal subject to test pressure is broken
- 3) Following related repairs and at 30 day intervals

The annular preventer will be functionally operated once per week. All BOP drills will be recorded in the IADC driller's log.

Accumulator:

The accumulator will have sufficient capacity to open the hydraulically controlled gate valve (if so equipped), close the annular preventer, and retain a minimum of 200 psig above pre-charge on the closing manifold without the use of the closing unit pumps. The reservoir capacity will be double the accumulator capacity, and the fluid level will be maintained at the manufacturer's recommendations. The accumulator shall have 2 independent power sources to close the preventers. Nitrogen bottles may be one of the independent power sources and, if so, shall maintain a charge equal to the manufacturer's specifications.

MUD PROGRAM FOR PROTECTIVE CASING HOLE

DEPTH	MUD WEIGHT	TYPE	VISC	pH	FLUID LOSS
600' – 6010'	8.7 – 9.2	LSND	34-45	9.0-10.0	12cc or Less

If required, implement a natural breakover to a salt or gypsum system as salt and gypsum sections are drilled. If loss circulation becomes a problem use LCM sweeps to control seepage & clean hole. Implement casing contingency if absolutely necessary.

CASING PROGRAM FOR PROTECTIVE CASING HOLE

DEPTH	SIZE	LENGTH	WT	GRADE	THREAD	REMARKS
0' – TD'	9-5/8"	6010'	47#	N-80	LT&C	

Rig up casing tools and run 9-5/8" protective casing as follows:

Float shoe, 2 joint of 9-5/8" 47.0# N-80 LT&C casing, Float collar, 6 Centralizers, middle shoe joint and one every other joint for 12 jts, run balance of 9-5/8" 47# N-80

CEMENT PROGRAM FOR PROTECTIVE CASING

725 sx (50:50) Poz: Premium	Weight:	13.8 ppg
3 % Bentonite	Yield:	1.43 ft ³ /sx
0.3% Halad R-344 (Low Fluid Loss Control)	Water:	6.45
gal/sx		
15 % Salt		
0.3% D-AIR 3000 (Defoamer)		
0.25 lb/sx Flocele		

TOC at \pm 3500 ft

Calculate cement volume based on gauge hole plus 30% excess. Displace with mud.

Set slips, ND diverter stack, cut off, NU & test wellhead. Clean pits and prepare for next hole section.

PRODUCTION HOLE: 6,010 to 7100'

Trip in the hole with an 8 3/4" insert bit, mud motor & MWD. Drill float, shoe and 20' of new hole. Perform an integrity test to 500 psi w/ 9ppg mud (10.5 ppg mud wt equivalent). Drill with a low colloid polymer system.

PRESSURE CONTROL AND SAFETY EQUIPMENT FOR PRODUCTION CASING STRING

Bottom to Top

11" 5M x 9-5/8" SOW csg head.

11" 5M x 11" 5M mud cross w/ (2) side outlets

one outlet 2-1/16 5M kill line

one outlet 3-1/16" 5M choke line

11" 5M double ram blowout preventers with 4-1/2" pipe rams top & CSO rams
btm

11" 5M annular preventer

11" Rotating head w/ fillup line

Connect BOP to choke manifold with pressure guage

Upper kelly cock valves with handles available

Safety valves and subs to fit all drill string connections in use

Inside BOP or float sub available

Testing Procedure:

Annular Preventer

The annular preventer will be pressure tested to 1500 psi for a period of ten minutes or until provisions of the test are met, whichever is longer. At a minimum, the pressure test will be performed:

- 4) When the annular is initially installed
- 5) Whenever any seal subject to test pressure is broken
- 6) Following related repairs and at 30 day intervals

The annular preventer will be functionally operated once per week.

Blowout Preventer

The BOP, choke manifold and related equipment will be pressure tested to 4500 psi, or 70% of the internal yield of the casing. Pressure will be maintained for a period of at least ten minutes or until the requirements of the test are met, whichever is longer. At a minimum the pressure test will be performed:

- 1) When the BOP is initially installed
- 2) Whenever any seal subject to test pressure is broken
- 3) Following related repairs and at 30 day intervals

The pipe and blind rams will be activated each trip, but not more than once each day. All BOP drills will be recorded in the IADC driller's log.

Accumulator:

The accumulator will have sufficient capacity to open the hydraulically controlled gate valve (if so equipped), close all rams plus the annular preventer, and retain a minimum of 200 psig above pre-charge on the closing manifold without the use of the closing unit pumps. The reservoir capacity will be double the accumulator capacity, and the fluid level will be maintained at the manufacturer's recommendations. The accumulator shall have 2 independent power sources to close the preventers. Nitrogen bottles may be one of the independent power sources and, if so, shall maintain a charge equal to the manufacturer's specifications.

The accumulator pre-charge pressure test will be conducted prior to connecting the closing unit to the BOP stack and at least once every six months thereafter. The accumulator pressure will be corrected if the measured pre-charge pressure is found to be above or below the maximum or minimum limits specified in Onshore Oil & Gas Order Number 2 (only nitrogen gas may be used to pre-charge).

Choke Manifold Equipment, Valves and Remote Controls

All choke lines will be straight lines unless turns use tee blocks or are targeted with running tees, and will be anchored to prevent whip and vibration

A valve will be installed in the closing line as close as possible to the annular preventer to act as a locking device. This valve will be maintained in the open position and will be closed only when the power source for the accumulator is inoperative.

Remote controls shall be readily accessible to the driller. Remote controls will be capable of both opening and closing all preventers. Master controls will be at the accumulator and will be capable of opening and closing all preventers and the choke line valve (if so equipped).

The choke manifold and BOP extension rods with hand wheels will be located outside the rig sub structure. The hydraulic BOP closing unit will be located at least twenty-five feet from the well head but readily accessible to the driller. Exact locations and configurations of the hydraulic BOP closing unit will depend upon the particular rig contracted to drill this well.

A flare line will be installed after the choke manifold, extending 125 feet from the center of the drill hole to a separate flare pit.

MUD PROGRAM FOR PRODUCTION HOLE

<u>DEPTH</u>	<u>MUD WEIGHT</u>	<u>TYPE</u>	<u>VISC</u>	<u>pH</u>	<u>FLUID LOSS</u>
6010' - 7100'	8.7 – 9.9	LC Polymer	34-50	9.0-10.0	10cc or Less

EVALUATION PROGRAM FOR PRODUCTION HOLE

At TD, circulate and condition hole clean for logs. Short trip to the intermediate casing monitoring well closely. TOH for logs.

Mudlogger: From 1500' to total depth.

Electric Logs:

<u>Tool</u>	<u>ICP to TD</u>
Dipole Sonic w/ GR	Yes
Dual laterolog and microlog w/ GR & Caliper	Yes
LithoDensity/Neutron w/ GR & Caliper	Yes
Micro Imaging Dipmeter	Yes

DST: To be decided

Cores: To be decided

CASING PROGRAM FOR PRODUCTION HOLE

DEPTH	SIZE	LENGTH	WT	GRADE	THREAD	REMARKS
0' – TD'	7"	7100'	26#	N-80	LT&C	

Rig up casing tools and run 7" production casing as follows:

Float shoe

2 joint of 7" 26# N-80 LT&C casing

Float collar

Centralizers as reqd.

Run balance of 7" 26# N-80.

CEMENT PROGRAM FOR PRODUCTION CASING

245 sx (50:50) Poz: Premium

2 % Bentonite

0.3% Halad R-344 (Low Fluid Loss Control)

gal/sx

5 % Salt

0.25 lb/sx Flocele

Weight: 14.35 ppg

Yield: 1.23 ft³/sx

Water: 4.81

TOC at \pm 5700 ft in 9-5/8" csg

Calculate cement volume based on log caliper +/- 25%. Displace cement w/water.

Set slips, ND BOP's, cut off, NU & test wellhead. Clean pits and release rig.

SCHEDULE

Location preparation is presently scheduled to begin on or about November 15, 2004

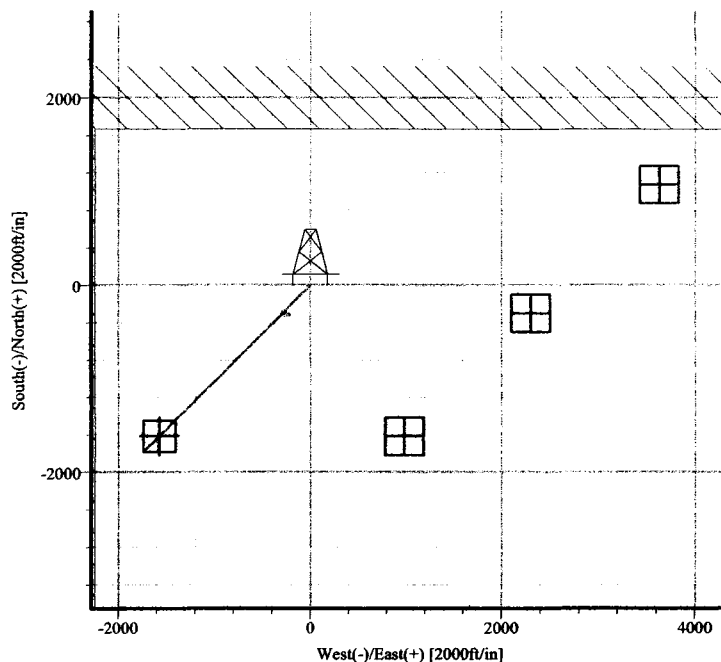
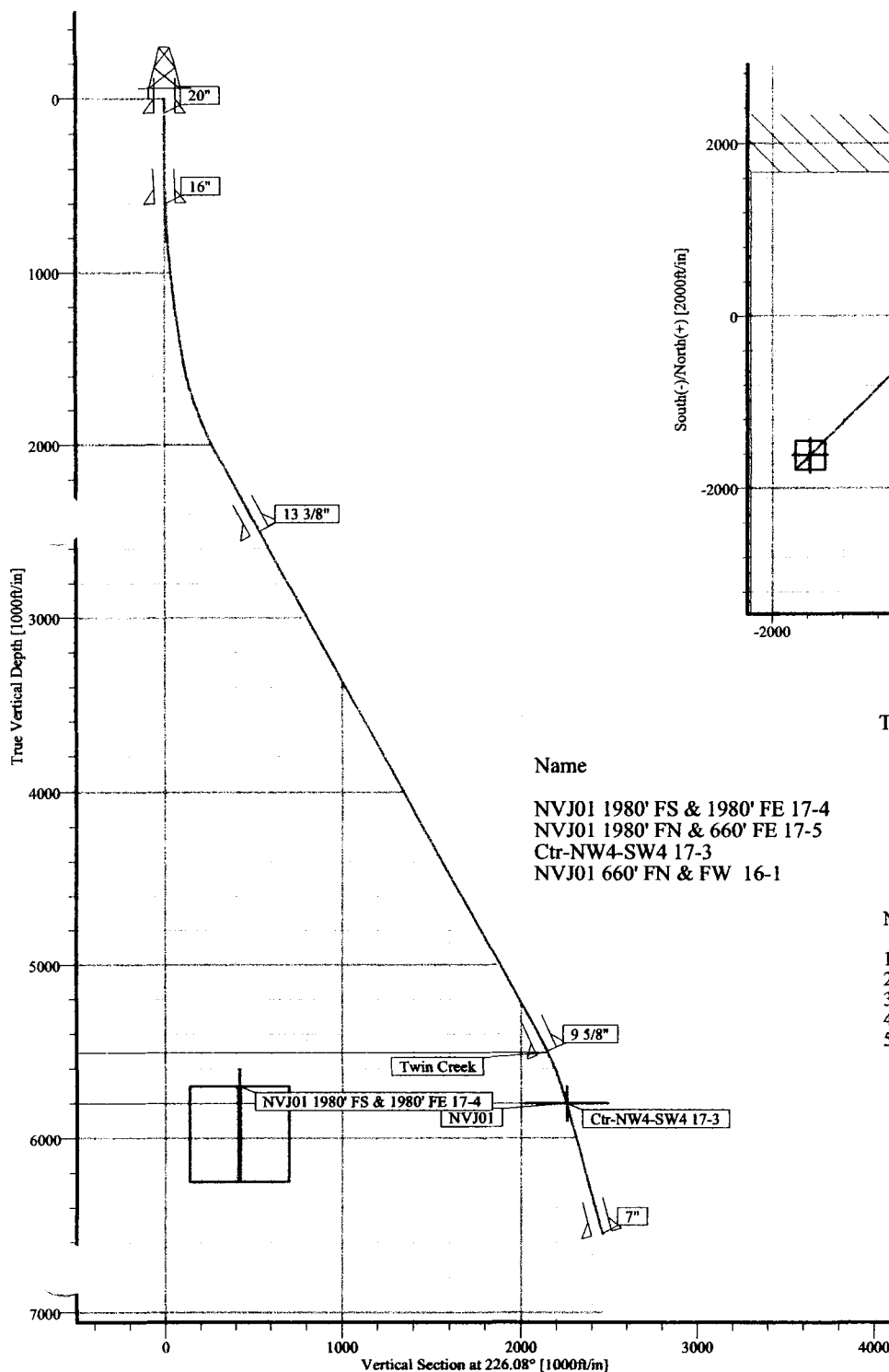
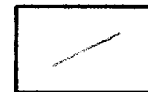
Drilling operations are anticipated to begin on or about December 10, 2004

end

Azimuths to True North
Magnetic North: 12.95°Magnetic Field
Strength: 52133nT
Dip Angle: 64.57°
Date: 7/6/2004
Model: igrf2000

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	300.0	0.00	224.16	300.0	0.0	0.0	0.00	224.16	0.0	
3	1506.1	10.00	224.16	1500.0	-75.3	-73.1	0.83	224.16	104.9	
4	2118.6	28.38	224.16	2076.0	-219.1	-212.8	3.00	0.00	305.3	
5	5881.4	28.38	224.16	5386.7	-1502.1	-1458.5	0.00	0.00	2092.5	
6	6327.2	15.00	224.16	5800.0	-1620.0	-1573.0	3.00	180.00	2256.8	Ctr-NW4-SW4 17-3
7	7103.7	15.00	224.16	6550.0	-1764.2	-1713.0	0.00	0.00	2457.6	



TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
NVJ01 1980' FS & 1980' FE 17-4	5700.0	-1621.0	978.0	Rectangle (400x400)
NVJ01 1980' FN & 660' FE 17-5	5765.0	-301.0	2298.0	Rectangle (400x400)
Ctr-NW4-SW4 17-3	5800.0	-1620.0	-1573.0	Rectangle (330x330)
NVJ01 660' FN & FW 16-1	5830.0	1076.0	3626.0	Rectangle (400x400)

CASING DETAILS

No.	TVD	MD	Name	Size
1	80.0	80.0	20"	20.000
2	600.0	600.1	16"	16.000
3	2500.0	2600.5	13 3/8"	13.375
4	5500.0	6008.0	9 5/8"	9.625
5	6550.0	7103.7	7"	7.000

FORMATION TOP DETAILS

No.	TVDPath	MDPath	Formation
1	5504.0	6012.4	Twin Creek
2	5800.0	6327.2	NVJ01

Plan: 17-3 Alt BHL (17-3/1)

Created By: Steve Schmitz

Date: 12/9/2004

Checked: _____

Date: _____

Weatherford

Planning Report

Company: Wolverine Gas & Oil Co of Utah Field: Sevier County, Utah Site: Pad A-2 Well: 17-3 Wellpath: 1	Date: 12/9/2004 Co-ordinate(NE) Reference: Well: 17-3, True North Vertical (TVD) Reference: SITE 0.0 Section (VS) Reference: Well (0.00N,0.00E,226.08Azi) Plan: 17-3 Alt BHL	Time: 14:21:07 Page: 1
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Field: Sevier County, Utah

Map System: US State Plane Coordinate System 1927
Geo Datum: NAD27 (Clarke 1866)
Sys Datum: Mean Sea Level

Map Zone: Utah, Central Zone
Coordinate System: Well Centre
Geomagnetic Model: igrf2000

Site: Pad A-2
 T23S R01W Sevier County, Utah
 NW/4 SE/4 Sec 17

Site Position:	Northing:	ft	Latitude:	
From: Lease Line	Easting:	ft	Longitude:	
Position Uncertainty:	0.0 ft		North Reference:	True
Ground Level:	0.0 ft		Grid Convergence:	-0.28 deg

Well: 17-3

Slot Name:

Well Position:	+N/-S	0.0 ft	Northing:	172191.22 ft	Latitude:	38 48 18.900 N
	+E/-W	16.0 ft	Easting:	1876368.49 ft	Longitude:	111 56 1.622 W
Position Uncertainty:		0.0 ft				

Wellpath: 1

Current Datum: SITE	Height	0.0 ft	Drilled From: Surface	0.0 ft
Magnetic Data: 7/6/2004			Tie-on Depth:	Mean Sea Level
Field Strength: 52133 nT			Above System Datum:	Mean Sea Level
Vertical Section: Depth From (TVD)	+N/-S		Declination:	12.95 deg
ft	ft		Mag Dip Angle:	64.57 deg
			+E/-W	Direction
			ft	deg
0.0	0.0		0.0	226.08

Plan: 17-3 Alt BHL

Date Composed: 7/6/2004
Version: 1
Tied-to: From Surface

Plan Section Information

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
300.0	0.00	224.16	300.0	0.0	0.0	0.00	0.00	0.00	224.16	
1506.1	10.00	224.16	1500.0	-75.3	-73.1	0.83	0.83	0.00	224.16	
2118.6	28.38	224.16	2076.0	-219.1	-212.8	3.00	3.00	0.00	0.00	
5881.4	28.38	224.16	5386.7	-1502.1	-1458.5	0.00	0.00	0.00	0.00	
6327.2	15.00	224.16	5800.0	-1620.0	-1573.0	3.00	-3.00	0.00	180.00	Ctr-NW4-SW4 17-3
7103.7	15.00	224.16	6550.0	-1764.2	-1713.0	0.00	0.00	0.00	0.00	

Section 1 : Start Hold

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
80.0	0.00	0.00	80.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
100.0	0.00	224.16	100.0	0.0	0.0	0.0	0.00	0.00	0.00	224.16
200.0	0.00	224.16	200.0	0.0	0.0	0.0	0.00	0.00	0.00	224.16
300.0	0.00	224.16	300.0	0.0	0.0	0.0	0.00	0.00	0.00	224.16

Section 2 : Start Build 0.83

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
400.0	0.83	224.16	400.0	-0.5	-0.5	0.7	0.83	0.83	0.00	0.00
500.0	1.66	224.16	500.0	-2.1	-2.0	2.9	0.83	0.83	0.00	0.00
600.0	2.49	224.16	599.9	-4.7	-4.5	6.5	0.83	0.83	0.00	0.00
600.1	2.49	224.16	600.0	-4.7	-4.5	6.5	0.00	0.00	0.00	0.00
700.0	3.32	224.16	699.8	-8.3	-8.1	11.6	0.83	0.83	0.00	0.00
800.0	4.15	224.16	799.6	-13.0	-12.6	18.1	0.83	0.83	0.00	0.00
900.0	4.97	224.16	899.2	-18.7	-18.1	26.0	0.83	0.83	0.00	0.00

Weatherford

Planning Report

Company: Wolverine Gas & Oil Co of Utah
 Field: Sevier County, Utah
 Site: Pad A-2
 Well: 17-3
 Wellpath: 1

Date: 12/9/2004 Time: 14:21:07
 Co-ordinate(N/E) Reference: Well: 17-3, True North
 Vertical (TVD) Reference: SITE 0.0
 Section (VS) Reference: Well (0.00N,0.00E,226.08Azi)
 Plan: 17-3 Alt BHL

Page: 2

Section 2 : Start Build 0.83

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
1000.0	5.80	224.16	998.8	-25.4	-24.7	35.4	0.83	0.83	0.00	0.00
1100.0	6.63	224.16	1098.2	-33.2	-32.2	46.2	0.83	0.83	0.00	0.00
1200.0	7.46	224.16	1197.5	-42.0	-40.8	58.5	0.83	0.83	0.00	0.00
1300.0	8.29	224.16	1296.5	-51.8	-50.3	72.2	0.83	0.83	0.00	0.00
1400.0	9.12	224.16	1395.4	-62.7	-60.9	87.3	0.83	0.83	0.00	0.00
1506.1	10.00	224.16	1500.0	-75.3	-73.1	104.9	0.83	0.83	0.00	0.00

Section 3 : Start Build 3.00

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
1600.0	12.82	224.16	1592.0	-88.6	-86.1	123.5	3.00	3.00	0.00	0.00
1700.0	15.82	224.16	1688.9	-106.4	-103.3	148.2	3.00	3.00	0.00	0.00
1800.0	18.82	224.16	1784.4	-127.7	-124.0	177.9	3.00	3.00	0.00	0.00
1900.0	21.82	224.16	1878.1	-152.6	-148.2	212.6	3.00	3.00	0.00	0.00
2000.0	24.82	224.16	1970.0	-181.0	-175.8	252.2	3.00	3.00	0.00	0.00
2100.0	27.82	224.16	2059.6	-212.8	-206.7	296.5	3.00	3.00	0.00	0.00
2118.6	28.38	224.16	2076.0	-219.1	-212.8	305.3	3.00	3.00	-0.02	-0.17

Section 4 : Start Hold

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
2200.0	28.38	224.16	2147.6	-246.9	-239.7	343.9	0.00	0.00	0.00	0.00
2300.0	28.38	224.16	2235.6	-281.0	-272.8	391.4	0.00	0.00	0.00	0.00
2400.0	28.38	224.16	2323.6	-315.1	-305.9	438.9	0.00	0.00	0.00	0.00
2500.0	28.38	224.16	2411.6	-349.2	-339.0	486.4	0.00	0.00	0.00	0.00
2600.0	28.38	224.16	2499.5	-383.3	-372.1	533.9	0.00	0.00	0.00	0.00
2600.5	28.38	224.16	2500.0	-383.4	-372.3	534.1	0.00	0.00	0.00	0.00
2700.0	28.38	224.16	2587.5	-417.4	-405.2	581.4	0.00	0.00	0.00	0.00
2800.0	28.38	224.16	2675.5	-451.4	-438.4	628.9	0.00	0.00	0.00	0.00
2900.0	28.38	224.16	2763.5	-485.5	-471.5	676.4	0.00	0.00	0.00	0.00
3000.0	28.38	224.16	2851.5	-519.6	-504.6	723.9	0.00	0.00	0.00	0.00
3100.0	28.38	224.16	2939.5	-553.7	-537.7	771.4	0.00	0.00	0.00	0.00
3200.0	28.38	224.16	3027.5	-587.8	-570.8	818.9	0.00	0.00	0.00	0.00
3300.0	28.38	224.16	3115.4	-621.9	-603.9	866.4	0.00	0.00	0.00	0.00
3400.0	28.38	224.16	3203.4	-656.0	-637.0	913.9	0.00	0.00	0.00	0.00
3500.0	28.38	224.16	3291.4	-690.1	-670.1	961.4	0.00	0.00	0.00	0.00
3600.0	28.38	224.16	3379.4	-724.2	-703.2	1008.9	0.00	0.00	0.00	0.00
3700.0	28.38	224.16	3467.4	-758.3	-736.3	1056.4	0.00	0.00	0.00	0.00
3800.0	28.38	224.16	3555.4	-792.4	-769.4	1103.9	0.00	0.00	0.00	0.00
3900.0	28.38	224.16	3643.4	-826.5	-802.5	1151.4	0.00	0.00	0.00	0.00
4000.0	28.38	224.16	3731.3	-860.6	-835.6	1198.9	0.00	0.00	0.00	0.00
4100.0	28.38	224.16	3819.3	-894.7	-868.7	1246.4	0.00	0.00	0.00	0.00
4200.0	28.38	224.16	3907.3	-928.8	-901.8	1293.9	0.00	0.00	0.00	0.00
4300.0	28.38	224.16	3995.3	-962.9	-935.0	1341.4	0.00	0.00	0.00	0.00
4400.0	28.38	224.16	4083.3	-997.0	-968.1	1388.9	0.00	0.00	0.00	0.00
4500.0	28.38	224.16	4171.3	-1031.1	-1001.2	1436.4	0.00	0.00	0.00	0.00
4600.0	28.38	224.16	4259.3	-1065.2	-1034.3	1483.9	0.00	0.00	0.00	0.00
4700.0	28.38	224.16	4347.2	-1099.3	-1067.4	1531.4	0.00	0.00	0.00	0.00
4800.0	28.38	224.16	4435.2	-1133.4	-1100.5	1578.9	0.00	0.00	0.00	0.00
4900.0	28.38	224.16	4523.2	-1167.5	-1133.6	1626.4	0.00	0.00	0.00	0.00
5000.0	28.38	224.16	4611.2	-1201.6	-1166.7	1673.9	0.00	0.00	0.00	0.00
5100.0	28.38	224.16	4699.2	-1235.7	-1199.8	1721.3	0.00	0.00	0.00	0.00
5200.0	28.38	224.16	4787.2	-1269.8	-1232.9	1768.8	0.00	0.00	0.00	0.00
5300.0	28.38	224.16	4875.2	-1303.8	-1266.0	1816.3	0.00	0.00	0.00	0.00
5400.0	28.38	224.16	4963.1	-1337.9	-1299.1	1863.8	0.00	0.00	0.00	0.00
5500.0	28.38	224.16	5051.1	-1372.0	-1332.2	1911.3	0.00	0.00	0.00	0.00
5600.0	28.38	224.16	5139.1	-1406.1	-1365.3	1958.8	0.00	0.00	0.00	0.00
5700.0	28.38	224.16	5227.1	-1440.2	-1398.4	2006.3	0.00	0.00	0.00	0.00
5800.0	28.38	224.16	5315.1	-1474.3	-1431.6	2053.8	0.00	0.00	0.00	0.00
5881.4	28.38	224.16	5386.7	-1502.1	-1458.5	2092.5	0.00	0.00	0.00	0.00

Weatherford Planning Report

Company: Wolverine Gas & Oil Co of Utah
Field: Sevier County, Utah
Site: Pad A-2
Well: 17-3
Wellpath: 1

Date: 12/9/2004 Time: 14:21:07
Co-ordinate(NE) Reference: Well: 17-3, True North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,226.08Azi)
Plan: 17-3 Alt BHL

Page: 3

Section 5 : Start Drop -3.00

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
5900.0	27.82	224.16	5403.1	-1508.4	-1464.6	2101.3	3.00	-3.00	0.00	-180.00
6000.0	24.82	224.16	5492.7	-1540.2	-1495.5	2145.6	3.00	-3.00	0.00	180.00
6008.0	24.58	224.16	5500.0	-1542.6	-1497.8	2148.9	3.00	-3.00	0.00	180.00
6012.4	24.44	224.16	5504.0	-1543.9	-1499.1	2150.7	3.00	-3.00	0.00	-180.00
6100.0	21.82	224.16	5584.6	-1568.8	-1523.1	2185.1	3.00	-3.00	0.00	180.00
6200.0	18.82	224.16	5678.3	-1593.5	-1547.2	2219.8	3.00	-3.00	0.00	-180.00
6222.9	18.13	224.16	5700.0	-1598.7	-1552.3	2227.0	3.00	-3.00	0.00	180.00
6290.9	16.09	224.16	5765.0	-1613.0	-1566.2	2247.0	3.00	-3.00	0.00	-180.00
6300.0	15.82	224.16	5773.8	-1614.8	-1568.0	2249.5	3.00	-3.00	0.00	-180.00
6327.2	15.00	224.16	5800.0	-1620.0	-1573.0	2256.8	3.00	-3.00	0.00	180.00

Section 6 : Start Hold

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
6358.3	15.00	224.16	5830.0	-1625.8	-1578.6	2264.8	0.00	0.00	0.00	0.00
6400.0	15.00	224.16	5870.3	-1633.5	-1586.1	2275.6	0.00	0.00	0.00	0.00
6500.0	15.00	224.16	5966.9	-1652.1	-1604.2	2301.5	0.00	0.00	0.00	0.00
6600.0	15.00	224.16	6063.5	-1670.7	-1622.2	2327.3	0.00	0.00	0.00	0.00
6700.0	15.00	224.16	6160.1	-1689.2	-1640.2	2353.2	0.00	0.00	0.00	0.00
6800.0	15.00	224.16	6256.7	-1707.8	-1658.2	2379.1	0.00	0.00	0.00	0.00
6900.0	15.00	224.16	6353.3	-1726.4	-1676.3	2404.9	0.00	0.00	0.00	0.00
7000.0	15.00	224.16	6449.9	-1744.9	-1694.3	2430.8	0.00	0.00	0.00	0.00
7103.7	15.00	224.16	6550.0	-1764.2	-1713.0	2457.6	0.00	0.00	0.00	0.00

Targets

Name	Description Dip. Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	← Latitude → Deg Min Sec			← Longitude → Deg Min Sec		
NVJ01 1980' FS & 1980' FE 17-4	-Rectangle (400x400)	5700.0	-1621.0	978.0	170565.49	1877338.61	38	48	2.878 N	111	55	49.269 W
	-Plan out by 2530.38 at	5700.0	-1598.7	-1552.3	170600.10	1874808.47	38	48	3.098 N	111	56	21.228 W
NVJ01 1980' FN & 660' FE 17-5	-Rectangle (400x400)	5765.0	-301.0	2298.0	171879.07	1878665.00	38	48	15.924 N	111	55	32.596 W
	-Plan out by 4080.88 at	5765.0	-1613.0	-1566.2	170585.81	1874794.47	38	48	2.956 N	111	56	21.404 W
Ctr-NW4-SW4 17-3	-Rectangle (330x330)	5800.0	-1620.0	-1573.0	170578.86	1874787.65	38	48	2.887 N	111	56	21.490 W
	-Plan hit target											
NVJ01 660' FN & FW 16-1	-Rectangle (400x400)	5830.0	1076.0	3626.0	173249.62	1879999.66	38	48	29.533 N	111	55	15.819 W
	-Plan out by 5864.08 at	5830.0	-1625.8	-1578.6	170573.12	1874782.02	38	48	2.830 N	111	56	21.560 W

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
80.0	80.0	20.000	26.000	20"
600.1	600.0	16.000	17.500	16"
2600.5	2500.0	13.375	17.500	13 3/8"
6008.0	5500.0	9.625	12.250	9 5/8"
7103.7	6550.0	7.000	8.500	7"

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
6012.4	5504.0	Twin Creek		0.00	0.00
6327.2	5800.0	NVJ01		0.00	0.00

012

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 6

ENTITY ACTION FORM

Operator: Wolverine Gas and Oil Company of Utah, LLC
Address: 55 Campau NW, One Riverfront Plaza
city Grand Rapids
state MI zip 49503-2616

Operator Account Number: N 1655Phone Number: (616) 458-1166

RECEIVED
DEC 21 2004

OIL, GAS & MINING

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304130036	Wolverine Federal 17-3		NWSW	17	23S	1W	Sevier
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
B	99999	13995	12/10/2004		12/22/04		
Comments: <u>NAVA</u>							

CONFIDENTIAL**Well 2**

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
Comments:							

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
Comments:							

ACTION CODES:

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

Steven R Hash - EXACT Engineering Inc

Name (Please Print)

Steven R. Hash

Signature

Consulting Engr 918-599-9400 12/20/2004

Title

Date

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

013

COPY

FORM APPROVED
OMB No. 1004-0137
Expires: March 31, 2007

5. Lease Serial No.
UTU-73528

CONFIDENTIAL

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

Wolverine Fed Exploration Unit

8. Well Name and No.

Wolverine Federal #17-3

9. API Well No.

4304130036

10. Field and Pool, or Exploratory Area
Covenant Field

11. County or Parish, State

Sevier Co, UT

SUBMIT IN TRIPLICATE- Other instructions on reverse side.

1. Type of Well

☐ Oil Well ☐ Gas Well ☒ Other

2. Name of Operator

Wolverine Gas & Oil Co of Utah, LLC

3a. Address

One Riverfront Plaza, 55 Campau NW, Grand Rapids, MI

3b. Phone No. (include area code)

616-458-1150

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

SHL: 1680' FNL & 2233' FWL

BHL: 1980' FSL & 660' FWL (proposed in progress)

T. 23 S., R. 1 W., S. 17

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION				
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off	
<input type="checkbox"/> Subsequent Report	<input checked="" type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity	
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other	
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon		
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal		

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Permission is requested for the following:

1) amend production casing size FROM: 7.0" TO: 5-1/2" in accordance with revised complete drilling prognosis (ver5 2004.12.09) attached

PLEASE MAINTAIN ALL INFORMATION CONTAINED HEREIN CONFIDENTIAL - thank you

RECEIVED

DEC 2 / 2004

DIV. OF OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed)

Steven R Hash

Title Consultant - EXACT Engineering Inc

Signature

Steven R. Hash

Date

12/21/2004

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Accepted by the
Utah Division of
Oil, Gas and Mining
Office

Date: 12/27/2004

Federal Approval Of This
Action Is Necessary

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

COPY
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WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC

DRILLING PROGNOSIS

Wolverine Federal #17-3
NW SW SEC 17-T23S-R1W
SEVIER CO., UTAH

BRIEF DRILLING PLAN

Due to surface topography constraints, directionally drill a 7100' MD (6550'TVD) test of the Navajo 1 formation on a day work contract basis from Wolverine's present work area known as Drill Pad A-2 located in Sec 17 T23S – R01W, Sevier Co, UT. Please refer to the directional drilling plan attached for detailed hole angle, trajectory and target information. Deviation is the primary drilling concern in this area. No abnormal pressure or hydrogen sulfide gas is expected, however, an H2S detector will be utilized. The projected surface and bottomhole locations are to be as follows:

Surface Location: 1680' fsl & 2233' fwl of Sec 17 T23N – R01W
BHL @ top of NVJO1 (5800' TVD) 1980' fsl & 660' fwl of Sec 17 T23N – R01W

20" conductor casing will be cemented to surface at approximately 100-120 ft BGL. 16" surface casing will be set & cemented to surface in a 17-1/2" hole deviated to approximately 3 deg at +/-600' (+/-600' TVD). A 12-1/4" hole will then be drilled to +/- 5800' (5300' TVD) deviated to approximately 28 deg from vertical by 2000' maintaining tangent to TD of 5800'. 9-5/8" intermediate casing will be set from surface to TD & cemented across the lowermost 2500'. An 8-1/2" hole will then be drilled to +/- 7100' (6550' TVD). 5-1/2" production casing will then be run from TD back to surface & cemented to approximately 300' into the 9-5/8" intermediate casing. In the event of lost circulation or other problems while drilling the 12-1/4" hole from 600' to 2700', the hole will be enlarged to 15" and a 13-3/8" casing string will be run from surface to TD (no deeper than 2700') and cemented into the surface casing. This is a contingency only.

EMERGENCY NUMBERS

Sevier Valley Medical Center	(435)-896-8271
Medical Helicopter	(800)-453-0120
Sheriff Department	(435)-896-2600
Fire Department-Richfield, UT	(435)-896-5479
Bureau of Land Management (Richfield):	(435)-896-1500
Bureau of Land Management (Salt Lake City)	(801) 539-4045
Utah Division of Oil, Gas and Mining (Salt Lake City):	(801)-538-5340

United States Bureau of Land Management

Contact Al McKee (801) 539-4045 24 hrs prior to spudding

Utah Division of Oil, Gas and Mining

Contact Carol Daniels (801) 538-5284, 24 hrs prior to spudding

GENERAL INFORMATION

OBJECTIVE: Navajo 1 @ 5800' (TVD)	ELEVATION: 5740' GL (est)
PROJECTED TOTAL DEPTH:	7,100 MD; 6550' TVD
SURFACE LOCATION:	1680' FNL & 2233' FWL Section 17-23S-1W
COUNTY: Sevier	STATE: Utah
DIRECTIONS TO LOCATION:	From the town of Sigurd, Utah go south approximately 3.5 miles on Hwy #24 to location on the left side of the road.

PROPOSED CASING PROGRAM:

Hole Size	Casing Size	Wt./Ft.	Grade	Joint	Measured Depth Set
	20"	.25 wall	X42	PE welded	100-120'
17-1/2"	16"	65#	H-40	BTC	0'-600'
*** 15"	13-3/8"	68#	J-55	BTC	0' - 2700'
12-1/4"	9-5/8"	47#	N-80	LTC	0'-5,800'
8-1/2"	5-1/2"	17#	N-80	LTC	0'- 7100'

*** contingency only – set only if hole conditions dictate

Hole Size	Casing Size	Drift ID, in.	OD of Couplings	Annular Volume in OH, cf/ft	Annular Volume in Csg, cf/ft	Capacity of casing, cf/ft
30"	20"	Conductor	Na			
20"	16"	15.062	17.0	.7854	.7854	1.2476
*** 15"	13-3/8"	12.259	14.375	.2927	.2927	.8406
12 1/4"	9-5/8"	8.525	10.625	0.3127	0.4659	0.4340
8-1/2"	5-1/2"	4.767	6.050	0.2291	0.2291	0.1305

*** contingency only – set only if hole conditions dictate

GEOLOGIC INFORMATION:

Formation	Interval (TVD)	Interval (MD)	Lithology	Prod	Abnormal Psi
Arapien	Surf – 5504'	Surf – 6010'	sh, siltstone, salt, evaporites		
TwinCreek1	5504' - 5800'	6010' – 6325'	Carbonates	X	
Navajo 1	5800- 6350'	6325' – 6900'	Sandstone w/ minor shale	X	
Total Depth	6550'	7100'	Sandstone w/ minor shale		

CONSTRUCTION OF SURFACE LOCATION

360' x 180' Pad

150' x 100' x 10' Reserve Pit with a 12 mil synthetic liner

96" diameter tin horn cellar, 10' deep.

Flare pit a minimum of 100' from wellhead.

SURFACE HOLE: 0' to 600'

Directionally drill a 17-1/2" hole with a TCI rock bit, mud motor & MWD equipment to approximately 600' using fresh water and gel/lime sweeps when necessary (make hole to fit 16" casing). Loss circulation is not expected to be a problem in this interval. If losses do occur, begin pumping LCM sweeps. If loss circulation cannot be healed with ± 25 ppb LCM, consider dry drilling (no returns). Maintain hole direction to approximately 230 deg azimuth in keeping with the attached directional plan.

PRESSURE CONTROL & SAFETY EQUIPMENT FOR SURFACE HOLE

Bottom to Top

20" drilling nipple – returns to mud pits – no pressure control

MUD PROGRAM FOR SURFACE HOLE

<u>DEPTH</u>	<u>MUD WEIGHT</u>	<u>TYPE</u>	<u>VISC</u>	<u>PH</u>	<u>FLUID LOSS</u>
0 -600'	8.4 – 8.9	FW/Gel/Lime	26-45	7-9	N/C

Note: Sweep hole every 100 – 200 feet or as needed for hole cleaning. Control the pH with Lime & Caustic to aid in gel flocculation for better carrying capacity.

CASING PROGRAM FOR SURFACE HOLE

<u>DEPTH</u>	<u>SIZE</u>	<u>LENGTH</u>	<u>WT</u>	<u>GRADE</u>	<u>THREAD</u>	<u>REMARKS</u>
0 - 600'	16"	600'	65#	H-40	BT&C	

Casing Running Sequence:

guide shoe

1 jt of 16" 65# H-40 BT&C

Float collar

Balance of 16" 65# H-40 BT&C

Centralizers as reqd.

RU cement co., hold safety meeting, test lines, cement 16" casing per cement company recommendation. Displace with fresh water or mud if used.

CEMENTING PROGRAM FOR SURFACE HOLE

Lead:

855 sx Premium Class G
2% calcium chloride
0.25 lb/sx flocele

Mixed at: 15.8 ppg
Yield: 1.17 ft³/sx
Water: 5.01 gal/sx

MUST CIRCULATE CEMENT TO SURFACE If the cement does **not** circulate to surface contact the UDOGM office for further instructions and remedial actions.

WOC A TOTAL OF 24 HOURS:

Wait 4 hours with the hydrostatic pressure of the displacement fluid in place, then cut off conductor and weld on a 16-3/4" 3M x 16" SOW casing head. NU 20" 2M diverter w/ 7-1/16" HCR valve rigged to mud/gas separator, mud tanks and flare pit.

PROTECTIVE CASING HOLE: 600' to 5800'

Directionally drill a 12-1/4" hole with a PDC and/or a TCI rock bit, mud motor & MWD equipment to approximately 5800' MD using a low solids – non dispersed system converting to salt mud in the lower portion. Loss circulation may be a problem in this interval. If losses do occur, begin pumping LCM sweeps. If loss circulation cannot be healed with ± 25 ppb LCM, consider dry drilling (no returns). If conditions are severe consider implementing a contingency for casing the problem zone with 13-3/8" csg as outlined above. Build hole angle to approximately 28 degrees by 2000' then maintain hole angle and direction to casing point in keeping with the attached directional plan. Protective casing should be set near the base of the Arapien interval to isolate potential poor hole conditions prior to drilling potential pay zones in the Twin Creek Lime.

PRESSURE CONTROL AND SAFETY EQUIPMENT FOR PROTECTIVE CASING STRING

Bottom to Top (see attached 2M Diverter diagram)

16-3/4" 3M x 16" SOW csg head.
16-3/4" 3M x 20" 2M spacer spool
20" 2M x 20" 2M x (2) 7-1/16" 2m side outlets
 one outlet 7-1/16" HCR valve w/ 6" blooie line to mud separator & flare pit
 one outlet (blank)
20" 2M Annular Preventer
20" 2M flanged btm drilling nipple w/ fillup line

Upper kelly cock valves with handles available
Safety valves and subs to fit all drill string connections in use
Inside BOP or float sub available

Testing Procedure:

Annular Preventer & HCR Valve

The annular preventer will be pressure tested to 1000 psi for a period of ten minutes or until provisions of the test are met, whichever is longer. At a minimum, the pressure test will be performed:

- 1) When the annular is initially installed
- 2) Whenever any seal subject to test pressure is broken
- 3) Following related repairs and at 30 day intervals

The annular preventer will be functionally operated once per week. All BOP drills will be recorded in the IADC driller's log.

Accumulator:

The accumulator will have sufficient capacity to open the hydraulically controlled gate valve (if so equipped), close the annular preventer, and retain a minimum of 200 psig above pre-charge on the closing manifold without the use of the closing unit pumps. The reservoir capacity will be double the accumulator capacity, and the fluid level will be maintained at the manufacturer's recommendations. The accumulator shall have two (2) independent power sources to close the preventers. Nitrogen bottles may be one of the independent power sources and, if so, shall maintain a charge equal to the manufacturer's specifications.

MUD PROGRAM FOR PROTECTIVE CASING HOLE

<u>DEPTH</u>	<u>MUD WEIGHT</u>	<u>TYPE</u>	<u>VISC</u>	<u>pH</u>	<u>FLUID LOSS</u>
600' – 5800'	8.7 – 9.6	LSND	34-45	9.0-10.0	12cc or Less

If required, implement a natural breakover to a salt or gypsum system as salt and gypsum sections are drilled. If loss circulation becomes a problem use LCM sweeps to control seepage & clean hole. Implement casing contingency if absolutely necessary.

CASING PROGRAM FOR PROTECTIVE CASING HOLE

<u>DEPTH</u>	<u>SIZE</u>	<u>LENGTH</u>	<u>WT</u>	<u>GRADE</u>	<u>THREAD</u>	<u>REMARKS</u>
0' – TD'	9-5/8"	5800'	47#	N-80	LT&C	

Rig up casing tools and run 9-5/8" protective casing as follows:

Float shoe, 2 joint of 9-5/8" 47.0# N-80 LT&C casing, Float collar, 6 Centralizers, middle shoe joint and one every other joint for 12 jts, run balance of 9-5/8" 47# N-80

CEMENT PROGRAM FOR PROTECTIVE CASING

725 sx (50:50) Poz: Premium	Weight:	13.8 ppg
3 % Bentonite	Yield:	1.43 ft ³ /sx
0.3% Halad R-344 (Low Fluid Loss Control)	Water:	6.45 gal/sx
15 % Salt		
0.3% D-AIR 3000 (Defoamer)		
0.25 lb/sx Flocele		

TOC at \pm 3500 ft

Calculate cement volume based on gauge hole plus 30% excess. Displace with mud.

Set slips, ND diverter stack, cut off, NU & test wellhead. Clean pits and prepare for next hole section.

PRODUCTION HOLE: 5,800 to 7100'

Trip in the hole with an 8-1/2" insert bit, mud motor & MWD. Drill float, shoe and 20' of new hole. Perform an integrity test to 500 psi w/ 9ppg mud (10.5 ppg mud wt equivalent). Drill with a low colloid polymer system.

PRESSURE CONTROL AND SAFETY EQUIPMENT FOR PRODUCTION CASING STRING

Bottom to Top (see attached 5M BOP Stack diagram)

11" 5M x 9-5/8" SOW csg head.

11" 5M x 11" 5M mud cross w/ (2) side outlets

one outlet 2-1/16 5M kill line

one outlet 3-1/16" 5M choke line

11" 5M double ram blowout preventers with 4-1/2" pipe rams top & CSO rams btm

11" 5M annular preventer

11" Rotating head w/ fillup line

Connect BOP to choke manifold with pressure guage

Upper kelly cock valves with handles available

Safety valves and subs to fit all drill string connections in use

Inside BOP or float sub available

Testing Procedure:**Annular Preventer**

The annular preventer will be pressure tested to 1500 psi for a period of ten minutes or until provisions of the test are met, whichever is longer. At a minimum, the pressure test will be performed:

- 4) When the annular is initially installed
- 5) Whenever any seal subject to test pressure is broken
- 6) Following related repairs and at 30 day intervals

The annular preventer will be functionally operated once per week.

Blowout Preventer

The BOP, choke manifold and related equipment will be pressure tested to 4500 psi, or 70% of the internal yield of the casing. Pressure will be maintained for a period of at least ten minutes or until the requirements of the test are met, whichever is longer. At a minimum the pressure test will be performed:

- 1) When the BOP is initially installed
- 2) Whenever any seal subject to test pressure is broken
- 3) Following related repairs and at 30 day intervals

The pipe and blind rams will be activated each trip, but not more than once each day. All BOP drills will be recorded in the IADC driller's log.

Accumulator:

The accumulator will have sufficient capacity to open the hydraulically controlled gate valve (if so equipped), close all rams plus the annular preventer, and retain a minimum of 200 psig above pre-charge on the closing manifold without the use of the closing unit pumps. The reservoir capacity will be double the accumulator capacity, and the fluid level will be maintained at the manufacturer's recommendations. The accumulator shall have two (2) independent power sources to close the preventers. Nitrogen bottles may be one of the independent power sources and, if so, shall maintain a charge equal to the manufacturer's specifications.

The accumulator pre-charge pressure test will be conducted prior to connecting the closing unit to the BOP stack and at least once every six months thereafter. The accumulator pressure will be corrected if the measured pre-charge pressure is found to be

above or below the maximum or minimum limits specified in Onshore Oil & Gas Order Number 2 (only nitrogen gas may be used to pre-charge).

Choke Manifold Equipment, Valves and Remote Controls

All choke lines will be straight lines unless turns use tee blocks or are targeted with running tees, and will be anchored to prevent whip and vibration

A valve will be installed in the closing line as close as possible to the annular preventer to act as a locking device. This valve will be maintained in the open position and will be closed only when the power source for the accumulator is inoperative.

Remote controls shall be readily accessible to the driller. Remote controls will be capable of both opening and closing all preventers. Master controls will be at the accumulator and will be capable of opening and closing all preventers and the choke line valve (if so equipped).

The choke manifold and BOP extension rods with hand wheels will be located outside the rig sub structure. The hydraulic BOP closing unit will be located at least twenty-five feet from the well head but readily accessible to the driller. Exact locations and configurations of the hydraulic BOP closing unit will depend upon the particular rig contracted to drill this well.

A flare line will be installed after the choke manifold, extending 100 feet from the center of the drill hole to a separate flare pit.

MUD PROGRAM FOR PRODUCTION HOLE

DEPTH	MUD WEIGHT	TYPE	VISC	pH	FLUID LOSS
5800' - 7100'	8.7 – 9.9	LC Polymer	34-50	9.0-10.0	10cc or Less

EVALUATION PROGRAM FOR PRODUCTION HOLE

At TD, circulate and condition hole clean for logs. Short trip to the intermediate casing monitoring well closely. TOH for logs.

Mudlogger: From 1500' to total depth.

Electric Logs:

Tool	ICP to TD
Dipole Sonic w/ GR	Yes
Dual laterolog and microlog w/ GR & Caliper	Yes
LithoDensity/Neutron w/ GR & Caliper	Yes

Micro Imaging Dipmeter	Yes
------------------------	-----

DST: To be decided

Cores: To be decided

CASING PROGRAM FOR PRODUCTION HOLE

<u>DEPTH</u>	<u>SIZE</u>	<u>LENGTH</u>	<u>WT</u>	<u>GRADE</u>	<u>THREAD</u>	<u>REMARKS</u>
0' – TD'	5-1/2"	7100'	17#	N-80	LT&C	

Rig up casing tools and run 5-1/2" production casing as follows:

Float shoe

2 joints of 5-1/2" 17# N-80 LT&C casing

Float collar

Centralizers as reqd.

Run balance of 5-1/2" 17# N-80.

CEMENT PROGRAM FOR PRODUCTION CASING

245 sx (50:50) Poz: Premium

2 % Bentonite

0.3% Halad R-344 (Low Fluid Loss Control)

5 % Salt

0.25 lb/sx Flocele

Weight: 14.35 ppg

Yield: 1.23 ft³/sx

Water: 4.81 gal/sx

TOC at \pm 5500 ft in 9-5/8" csg

Calculate cement volume based on log caliper \pm 25%. Displace cement w/water.

Set slips, ND BOP's, cut off, NU & test wellhead. Clean pits and release rig.

SCHEDULE

Location preparation is presently scheduled to begin on or about November 15, 2004

Drilling operations are anticipated to begin on or about December 10, 2004

end

PRESSURE CONTROL SYSTEM SCHEMATIC

Prepared by:
EXACT Engineering, Inc
Tulsa, OK (918) 599-9400

2M Diverter Stack --- to be utilized while drilling holes for surface and protective casing thru Arapien formation section

Operator:

Wolverine Gas & Oil Co. of Utah, LLC

Well name and number

Wolverine Federal #17-3

Max. anticipated surface pressure 2000 psi

Annular B.O.P. 20 ", 2M W.P.

B.O.P. none Rams none ", na W.P.
(Pipe/Blind)

B.O.P. none Rams ", W.P.
(Pipe/Blind)

Check Valve none ", W.P.

Valve none ", W.P.

Valve blind flange W.P.

Valve 7-1/16" 2M "HCR"

Valve none

Kill Line Manifold

Manifold Line

Ground level

Spool 20" 2M x 20" 2M x 7-1/16" 2M outlets W.P.

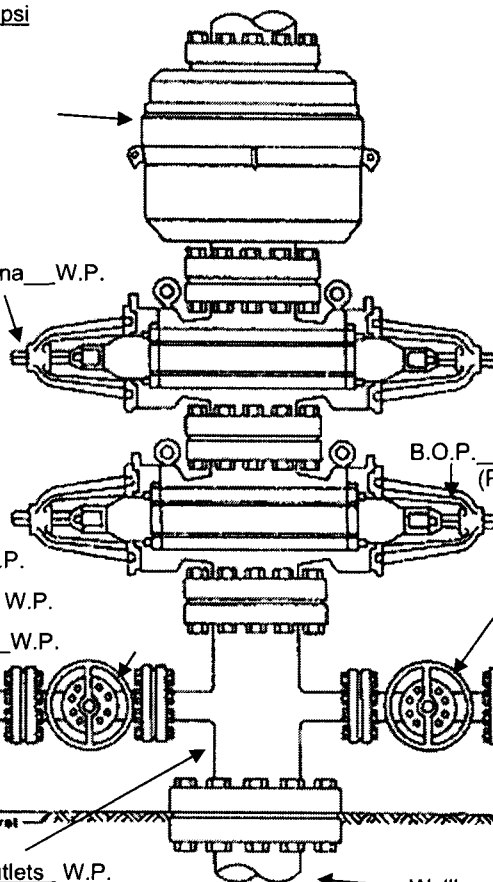
Wellhead 20" 2M x 16-3/4" 3M adapter
w/ 16-3/4" 3M x 16" SOW csg head

B.O.P.

Manual

x Hydraulic

Sour Trim



PRESSURE CONTROL SYSTEM SCHEMATIC

Prepared by:
EXACT Engineering, Inc
Tulsa, OK (918) 599-9400

Operator:

Wolverine Gas & Oil Co. of Utah, LLC

Well name and number

Wolverine Federal #17-3

5M BOP Stack --- to be utilized while drilling holes for production casing thru Twin Creek & Navajo intervals

Max. anticipated surface pressure 3000 psi

Annular B.O.P. 11" - 5M WP

B.O.P. 4-1/2" pipe Rams 11" - 5M W.P.
(Pipe/Blind)

B.O.P.
Manual
☒ Hydraulic
Sour Trim

Check Valve 2-1/16" 5M WP

Valve 2-1/16" 5M WP

Valve 2-1/16" 5M WP

B.O.P. blind Rams 11" - 5M W.P.
(Pipe/Blind)

Valve 3-1/16" 5M WP

Valve 3-1/16" 5M WP

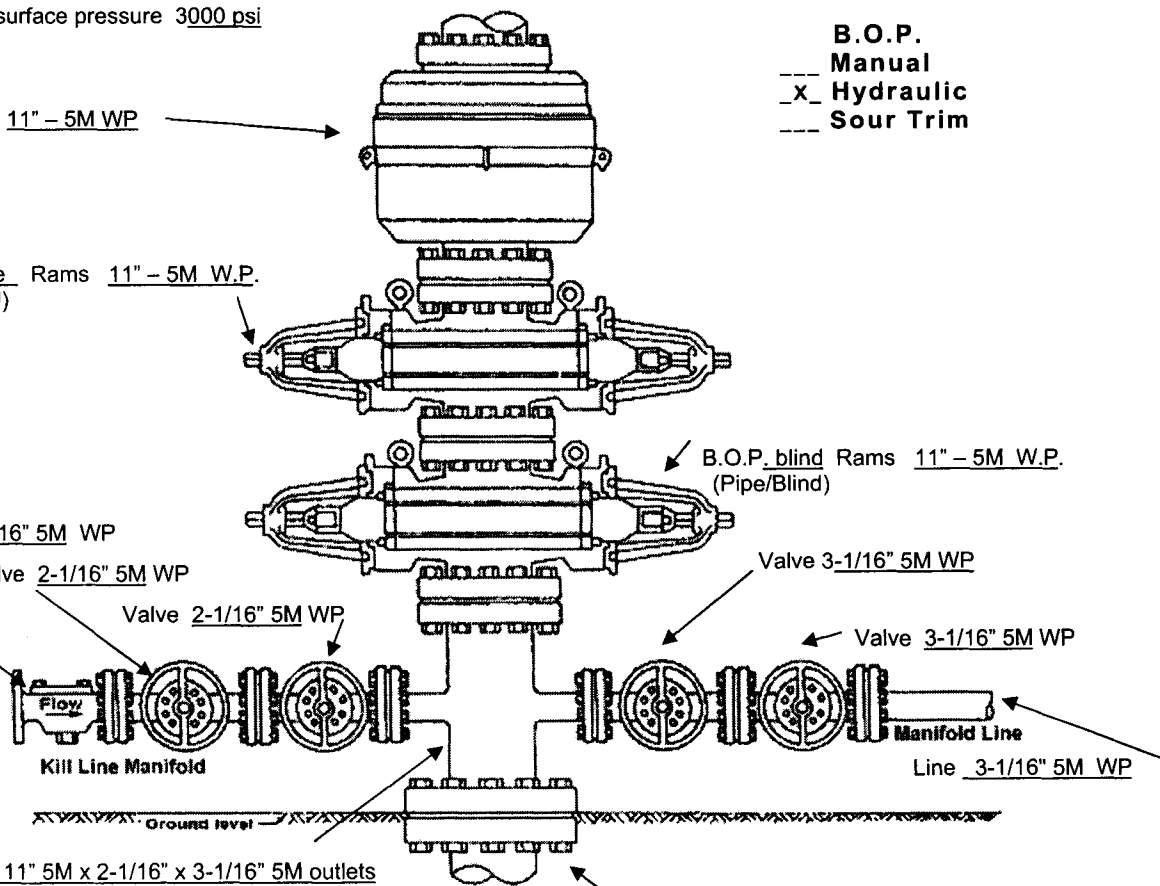
Flow
Kill Line Manifold

Manifold Line
Line 3-1/16" 5M WP

Spool 11" 5M x 11" 5M x 2-1/16" x 3-1/16" 5M outlets

Wellhead 11" 5M x 11" 5M spacer spool
w/ 11" 5M x 9-5/8" SOW csg head

Ground level



EXACT Engineering, Inc.
415 S. Boston Ave., Suite 734
Tulsa, Oklahoma 74103

EXACT Engineering, Inc.
www.exactengineering.com

Steven R. Hash, P.E.

office 918.599.9400
office fax 918.599.9401

Steve 24/7 & mobil 918.599.9801
stevehash@exactengineering.com

Fax

To:	Al McKee (BLM) & Dustin Doucet (WDOGM)	From:	Steve Hash
Fax:	(801) 539-4200 (801) 359-3940	Pages:	3 total
Phone:	(801) 539-4045 (801) 538-5281	Date:	Dec 18, 2004
Re:	Wolverine Federal #17-3 – addl info	CC:	

Dear Mr McKee & Mr Doucet,

Attached please find schematics for the BOP equipment that was described in our drilling procedure recently submitted for the referenced well by sundry notice. These diagrams are for BOP configurations that will be utilized for the protective casing hole (2M) and the production casing hole (5M). Please call if further questions or concerns. Thanks for you cooperation.

Regards,
Steve Hash

PRESSURE CONTROL SYSTEM SCHEMATIC

Prepared by:
EXACT Engineering, Inc
Tulsa, OK (918) 599-9400

5M BOP Stack --- to be utilized while drilling holes for
production casing thru Twin Creek & Navajo intervals

Operator:

Wolverine Gas & Oil Co. of Utah, LLC

Well name and number

Wolverine Federal #17-3

Max. anticipated surface pressure 3000 psi

Annular B.O.P. 11" - 5M WP

B.O.P.
Manual
x Hydraulic
Sour Trim

B.O.P. 4-1/2" pipe Rams 11" - 5M W.P.
(Pipe/Blind)

B.O.P. blind Rams 11" - 5M W.P.
(Pipe/Blind)

Check Valve 2-1/16" 5M WP

Valve 2-1/16" 5M WP

Valve 2-1/16" 5M WP

Valve 3-1/16" 5M WP

Valve 3-1/16" 5M WP

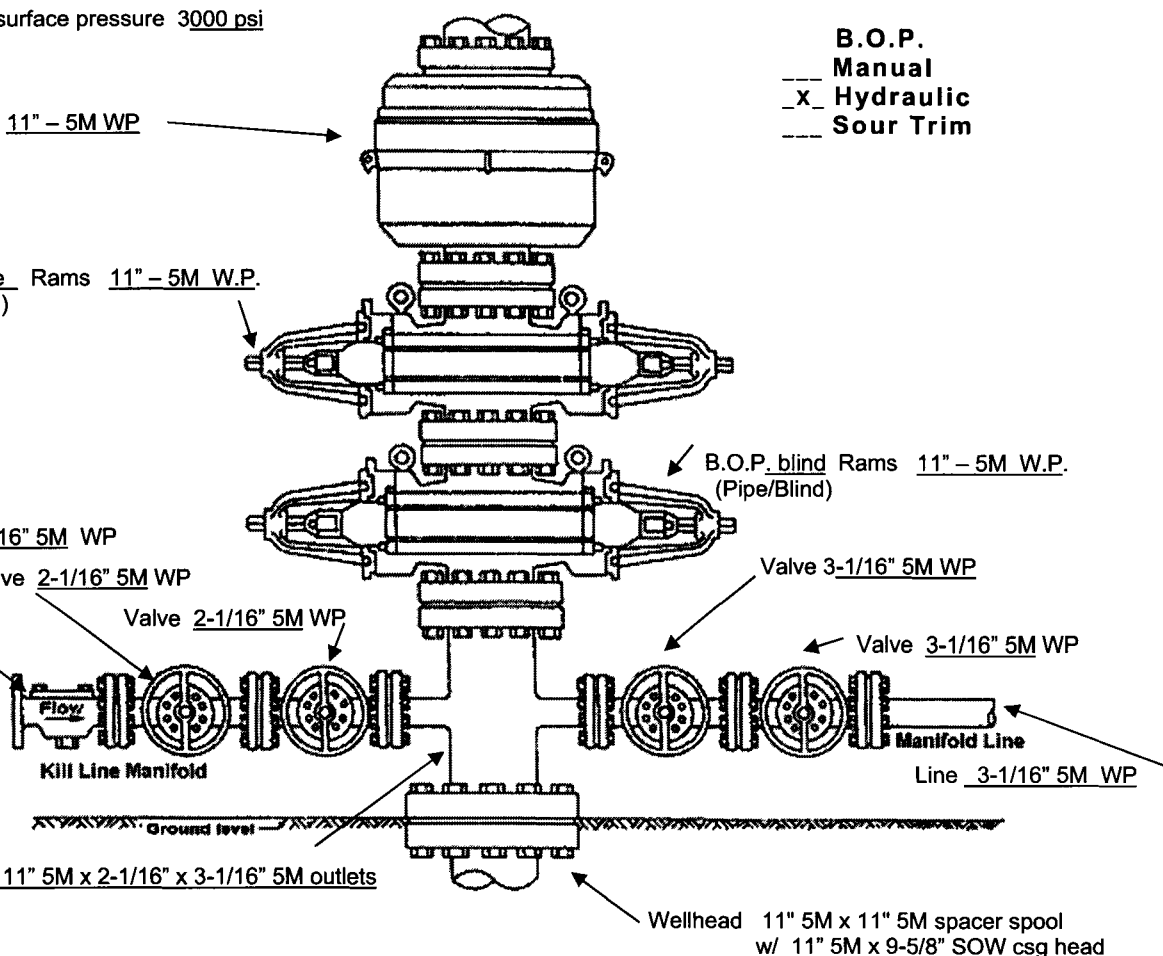
Flow
Kill Line Manifold

Manifold Line

Line 3-1/16" 5M WP

Spool 11" 5M x 11" 5M x 2-1/16" x 3-1/16" 5M outlets

Wellhead 11" 5M x 11" 5M spacer spool
w/ 11" 5M x 9-5/8" SOW csg head



PRESSURE CONTROL SYSTEM SCHEMATIC

Prepared by:
EXACT Engineering, Inc
Tulsa, OK (918) 599-9400

2M Diverter Stack — to be utilized while drilling holes for surface and protective casing thru Arapien formation section

Operator:

Wolverine Gas & Oil Co. of Utah, LLC

Well name and number

Wolverine Federal #17-3

Max. anticipated surface pressure 2000 psi

Annular B.O.P. 20" , 2M W.P.

B.O.P. none Rams none" , na W.P.
(Pipe/Blind)

Check Valve none" , na W.P.

Valve none" , na W.P.

Valve blind flange W.P.

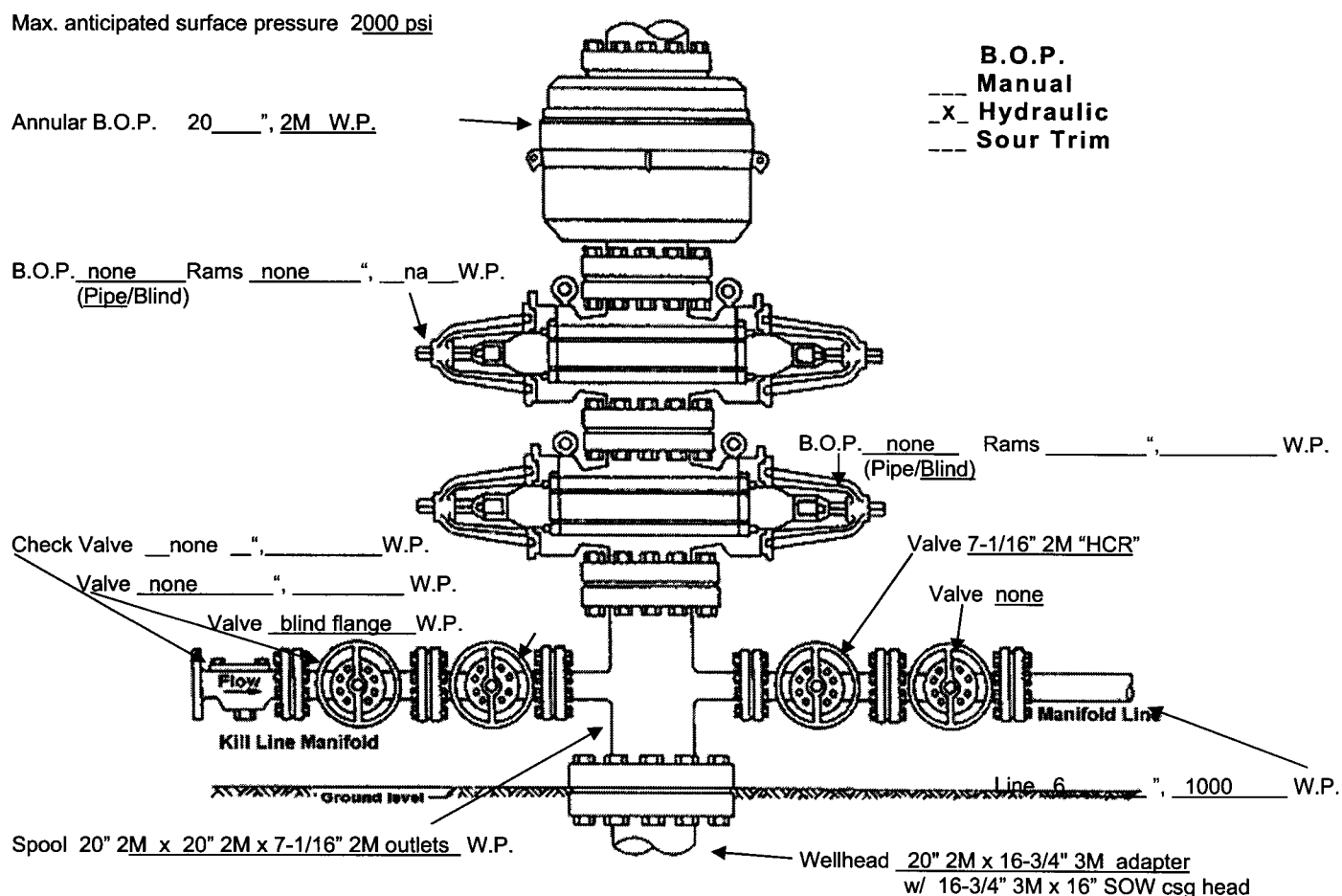
B.O.P. none Rams na" , na W.P.
(Pipe/Blind)

Valve 7-1/16" 2M "HCR"

Valve none

Spool 20" 2M x 20" 2M x 7-1/16" 2M outlets W.P.

Wellhead 20" 2M x 16-3/4" 3M adapter
w/ 16-3/4" 3M x 16" SOW csg head



B.O.P.
Manual
☒ Hydraulic
Sour Trim

EXACT Engineering, Inc.www.exactengineering.com

415 S. Boston Ave., Suite 734, Tulsa, OK 74103 • (918) 599-9400 • (918) 599-9401 (fax)

Steven R. Hash, P.E.
Registered Professional Engineer
stevehash@exactengineering.com

CONFIDENTIAL PLEASE!

CONFIDENTIAL

December 18, 2004

Mr. Dustin Doucet
Utah Division of Oil, Gas & Mining
1594 West North Temple, Suite 1210
Salt Lake City, UT 84114-5801

Re: Wolverine Federal 17-3 well
Sec 17 T23S R01W
Sevier Co., UT
API# 43-041-30036

Dear Mr. Doucet,

On behalf of Wolverine Gas and Oil Company of Utah, LLC, please find enclosed daily activity reports for the subject well from initial report on December 5, 2004 (spud Dec 10, 2004) through December 17, 2004. Our present status is drilling at 3528' and we now anticipate setting a 9-5/8 inch protective casing string near 5800'. This is in accordance with our latest Sundry Notice dated Dec 9, 2004. We respectfully request that the enclosed information remain confidential.

Very Truly Yours,

Steven R. Hash
Consulting Engineer for Wolverine Gas and Oil Company of Utah, LLC

copy without enclosures via email to:

Wolverine Gas & Oil Co of Utah, LLC: Richard Moritz, Sue Benson
EXACT Engineering, Inc. well file

RECEIVED

DEC 2 / 2004

DIV. OF OIL, GAS & MINING

Petroleum Engineering Consulting, Personnel & Jobsite Supervision
complete well design, construction & management, drilling, completion, production, pipelines, appraisals,
due diligence, acquisitions, procedures, temporary personnel and field supervision

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR		COUNTY, STATE	SPUD DATE	API#		SUPERVISOR
12/17/04	Wolverine Federal 17-3	Unit Rig #111		Sevier, UT	10-Dec	43-041-30036		Darren Naylor
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
8	Drilling		3,528	625	23.50	26.6	surface	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
9.8	35	44.0	3/32	10.5	0.50	5.0	5	8	4/7	3415	12/17/17:15	93,000	2000		

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA		IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
																T	B	G
2	12.250	DPI	MP54-B2	437	2016038	6 x 16	1.18	615		2913	82.00	35.5	Y	150	10/25			
												#DIV/0!						
												#DIV/0!						
												#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STR	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD			60 spm	80 spm	100 spm
1	National	6.25	8.5	3.22	105	338							1				
2	National	6.25	8.5	3.22	105	338							2				
Both				6.44	210	676	128	133	1900	300							

SLOW PUMP

DRILL STRING					GEOLOGIC				GENERAL INFO	
BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO	
Bit		1.50							Rig No	Unit 111
Motor		29.00							Cell Nr	918-645-6671
9 3/4 stabilizer		5.50			GAS DATA				Last BOP Test	12/14
2 - 8" monels		62.00			BOTTOMS UP TIME	BG GAS	CONN GAS	TRIP GAS	Next BOP Test	
8" shock sub		12.00			SHOWS				Last Safety Meeting	12/14
6 - 6 5/8 spiral wt.		180.00			GAS UNITS	FROM	TO	ROP (F/T/HR)	Last BOP Drill	12/14
26 - 5" spiral wt.		780.00							Last Operate Pipe Ra	
jar		32.00							Last Operate Blind Ra	
Total BHA:		1,102.00							Last Operate Annular	12/14
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	LAST CASING	NEXT CASING
128	75	150	115	550	5,736	17	5,753		615	5800

SURVEYS

[illegible]

DAILY ACTIVITY

[illegible]

24 hrs - midnight to midnight

DAILY ACTIVITY			
FROM	TO	HRS	
24 HOURS - MIDNIGHT TO MIDNIGHT			
0:00	10:00	10.00	Drill & Surveys 2265 to 2541
10:00	11:00	1.00	Circ. Btms. Up & dry job
11:00	12:30	1.50	Wiper trip to btm. Of surface csng. Trip went well hole looks good.
12:30	13:30	1.00	Repair kelly spinners
13:30	15:00	1.50	RIH
15:00	15:30	0.50	Wash 50' to btm. No fill
15:30	0:00	8.50	Drill & Surveys 2541 to 2903
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
Daily Total		24.00	

24 hrs - midnight to midnight

[illegible]

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR		COUNTY, STATE	SPUD DATE	API#		SUPERVISOR
12/14/04	Wolverine Federal 17-3	Unit Rig #111		Sevier, UT	10-Dec	43-041-30036		Darren Naylor
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
5	Drilling		1,345	730	16.50	44.2	surface	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
9.1	34	20.0	2	9.0	0.50	5.5	8	3	3/4	1080	12/14/16:00	1,400	510		

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA		IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B									G		
2	12.250	DPI	MP54-B2	437	2016038	6 x 16	1.18	615		730	16.50	44.2	Y	240	15			
												#DIV/0!						
												#DIV/0!						
												#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD	Flow Rate			
													60 gpm	80 gpm	100 gpm	120 gpm
1	National	6.25	8.5	3.22	110	354							1			
2	National	6.25	8.5	3.22	110	354							2			
Both				6.44	220	708	134	162	1550	300						

SLOW PUMP

		60 spm	80 spm	100 spm
1				
2				

DRILL STRING

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.
Bit		1.50		
Motor		29.00		
9 3/4 stabilizer		5.50		
2 - 8" monels		62.00		
8" shock sub		12.00		
6 - 6 5/8 spiral wt.		180.00		
26 - 5" spiral wt.		780.00		
jar		32.00		
Total BHA:		1,102.00		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE
75	75	75	75	

GEOLOGIC

FORMATION	MD	TVD	LITHOLOGY
GAS DATA			
BOTTOMS UP TIME	BG GAS	CONN GAS	TRIP GAS
SHOWS			
GAS UNITS	FROM	TO	ROP (F1/HR)
GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG
5,740	17	5,757	

GENERAL INFO

RIG INFO	
Rig No	Unit 111
Cell Nc	918-645-6671
Last BOP Test	12/14
Next BOP Test	
Last Safety Meeting	12/14
Last BOP Drill	12/14
Last Operate Pipe Ran	
Last Operate Blind Ran	
Last Operate Annular	12/14
LAST CASING	NEXT CASING
615	5800

SURVEYS

MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL
831	6.40	242.00	830	38.45	-19.00	-35.00	1.08	MWD
1,286	8.40	228.10	1281	90.13	-50.44	-76.55		MWD

DAILY ACTIVITY

FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT
0:00	4:00	4.00	Test wellhead, spools, diverter, hcr valve, upper & lower kelly valves & casing to 1000 psi. for 15 min.
4:00	6:00	2.00	Organize Tools, pick up rig floor, Take care of Unit safety with Unit safety man.
6:00	7:00	1.00	Tag Cement @ 607' Drill cement & shoe.
7:00	14:00	7.00	Drill & surveys 615' to 1069'
14:00	14:30	0.50	Rig Service
14:30	0:00	9.50	Drill & surveys 1069' to 1345'
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
Daily Total		24.00	

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR		COUNTY, STATE	SPUD DATE	API#		SUPERVISOR
12/13/04	Wolverine Federal 17-3	Unit Rig #111		Sevier, UT	10-Dec	43-041-30036		Darren Naylor
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
4	WOC		615	0	0.00	#DIV/0!	surface	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
9.1	51	12.0	2	7.0	0.50	5.5	12	16	12/18	540	12/12/08:00	1,100	120		

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B	G											
													#VALUE!						
													#DIV/0!						
													#DIV/0!						
													#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD			60 spm	80 spm	100 spm
1	National	6.25	8.5	3.234		#####							1				
2	National	6.25	8.5	3.234		#####							2				
Both				6.468	#####	#####	68	73	1150	300							

SLOW PUMP

DRILL STRING					GEOLOGIC				GENERAL INFO	
BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO	
Bit									Rig No	Unit 111
Motor									Cell Nc	918-645-6671
14 3/4 stabilizer									Last BOP Test	
2 - 8" monels		62.00			BOTTOMS UP TIME	BG GAS	GAS DATA CONN GAS	TRIP GAS	Next BOP Test	
8" shock sub		10.00							Last Safety Meeting	
6 - 6 5/8 spiral wt.		180.00					SHOWS TO	ROP (FT/HR)	Last BOP Drill	
9 - 5" spiral wt.		276.00			GAS UNITS	FROM			Last Operate Pipe Ran	
									Last Operate Blind Ran	
Total BHA:		528.00							Last Operate Annular	
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	LAST CASING	NEXT CASING
65	65	65	65		5,740	17	5,757			

SURVEYS

[illegible]

DAILY ACTIVITY

FROM	TO	HRS	
0:00	7:00	7.00	woc
7:00	11:30	4.50	Cut off weld head
11:30	21:00	9.50	Nipple Up
21:00	0:00	3.00	PU Motor RIH to 607
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
Daily Total		24.00	

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR		COUNTY, STATE	SPUD DATE	API#		SUPERVISOR
12/12/04	Wolverine Federal 17-3	Unit Rig #111		Sevier, UT	10-Dec	43-041-30036		Darren Naylor
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
3	WOC		615	7	0.50	14.0	surface	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
9.1	51	12.0	2	7.0	0.50	5.5	12	16	12/18	540	12/12/08:00	1,100	120		

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA		IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION				
						T	B									G				
1	17.500	STC	GSSH=2		MJ3820	3 x 24	1 x 18		140	615	475	14.00		33.9	Y	200	25	1	1	I
														#DIV/0!						
														#DIV/0!						
														#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD	60 spm	80 spm	100 spm
1	National	6.25	8.5	3.234	120	388							1		
2	National	6.25	8.5	3.234	120	388							2		
Both				6.468	240	776	68	73	1150	300					

SLOW PUMP

DRILL STRING					GEOLOGIC				GENERAL INFO			
BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO			
Bit		1.50							Rig No	Unit 111		
Motor		30.00							Cell Nc	918-645-6671		
14 3/4 stabilizer		8.00							Last BOP Test			
2 - 8" monels		62.00			BOTTOMS UP TIME	BG GAS	GAS DATA CONN GAS	TRIP GAS	Next BOP Test			
8" shock sub		10.00							Last Safety Meeting			
6 - 6 5/8 spiral wt.		180.00			GAS UNITS	FROM	SHOWS TO	ROP (FT/HR)	Last BOP Drill			
9 - 5" spiral wt.		276.00							Last Operate Pipe Ran			
									Last Operate Blind Ran			
Total BHA:		567.50							Last Operate Annular			
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	LAST CASING	NEXT CASING		
65	65	65	65		5,740	17	5,757					

SURVEYS

MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL
162	0.20	292.60	162	0.11	0.11	-0.26	0.10	MWD	408	2.80	246.40	408	6.24	-2.29	-6.45	0.88	MWD
316	2.00	248.70	316	2.60	-0.80	-2.90	0.80	MWD	548	3.90	233.60	548	14.00	-6.80	-12.88	0.74	MWD

DAILY ACTIVITY

FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT
0:00	4:00	4.00	Wash & Ream f/ 490 to 608
4:00	4:30	0.50	Drill 608' to 615'
4:30	5:00	0.50	Circ. 100+ viscosity sweep
5:00	5:30	0.50	POOH to 300'
5:30	8:30	3.00	Wash & Ream f/ 300' to 430'
8:30	9:00	0.50	RIH
9:00	10:00	1.00	Wash & Ream 550' to 615'
10:00	12:30	2.50	Circ. & condition
12:30	14:00	1.50	POOH LD motor
14:00	14:30	0.50	RU csng. Crew
14:30	20:00	5.50	Run 14 jts. H40, 65#, 16" surface csng.
20:00	21:00	1.00	Circ. & condition, RD csng. Crew
21:00	23:00	2.00	RU and cement csng. Plug down @ 23:00
23:00	0:00	1.00	WOC
0:00			
0:00			Mixed & pumped 855 sks. 15.8 ppg. AG-300, 2%CACL2, 25#SK.Floceel
0:00			Circulated cement to surface, 25 bbl. To pit, cement stayed @ surface.
Daily Total	24.00		

CONFIDENTIAL

24 hrs - midnight to midnight

DAILY ACTIVITY			
FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT
0:00	2:00	2.00	LD motor & stabilizer
2:00	3:00	1.00	RU csng crew, held safety meeting.
3:00	6:30	3.50	PU & Run 16" surface casng. To 308'
6:30	15:00	8.50	Run & circ. Csng to 381'. Hit ledge @ 308' wash & try to get thru ledges.
15:00	18:00	3.00	RD Circulating iron, LD 9 jts. Csng.
18:00	21:30	3.50	PU motor, RIH to 409' hit Ledge, LD 4 jts.
21:30	0:00	2.50	Wash & Ream f/300' to 490'. Conditioning Mud & bring vis. Up to 50+
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
Daily Total		24.00	

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#		SUPERVISOR	
12/10/04	Wolverine Federal 17-3	Unit Rig #111	Sevier, UT	10-Dec	43-041-30036		Darren Naylor	
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
1	POOH to run surface csng.		608	468	13.50	34.7	surface	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
8.7	32	nc		9.0						608					

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA		IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B									G		
1	17.500	STC	GSSH=2		MJ3820	3 x 24	1 x 18	140	608	468	13.50	34.7	Y	200	25	1	1	I
												#DIV/0!						
												#DIV/0!						
												#DIV/0!						

HYDRAULICS

SLOW PUMP

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD	60 spm	80 spm	100 spm
1	National	6.25	8.5	3.234	120	388	68	73	1150	300			1		
2	National	6.25	8.5	3.234	120	388	64						2		
Both				6.468	240	776									

DRILL STRING

GEOLOGIC

GENERAL INFO

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO	
Bit		1.50							Rig No	Unit 111
Motor		30.00							Cell Nc	918-645-6671
14 3/4 stabilizer		8.00							Last BOP Test	
2 - 8" monels		62.00			BOTTOMS UP TIME	BG GAS	GAS DATA CONN GAS		TRIP GAS	Next BOP Test
8" shock sub		10.00								Last Safety Meeting
6 - 6 5/8 spiral wt.		180.00			SHOWS					Last BOP Drill
9 - 5" spiral wt.		276.00			GAS UNITS	FROM	TO		ROP (FT/HR)	Last Operate Pipe Ran
										Last Operate Blind Ran
Total BHA:		567.50								Last Operate Annular
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	LAST CASING	NEXT CASING
65	65	65	65		5,740	17	5,757			

SURVEYS

MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL
162	0.20	292.60	162	0.11	0.11	-0.26	0.10	MWD	408	2.80	246.40	408	6.24	-2.29	-6.45	0.88	MWD
316	2.00	248.70	316	2.60	-0.80	-2.90	0.80	MWD	548	3.90	233.60	548	14.00	-6.80	-12.88	0.74	MWD

DAILY ACTIVITY

FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT
0:00	3:00	3.00	PU directional tools, MWD & BHA
3:00	6:00	3.00	Drill cement f/ 106' to 140' SPUD 17-1/2" hole @ 06:00 12/10/04
6:00	16:30	10.50	Drill & surveys 140' to 455'
16:30	17:00	0.50	Rig service
17:00	20:00	3.00	Drill & surveys 455' to 608'
20:00	21:00	1.00	Circ. And pump two 40 bbl. 80 vis. Sweeps around
21:00	22:00	1.00	Wiper trip up to btm. of conductor
22:00	23:00	1.00	Circ. And pump two 40 bbl. 80 vis. Sweeps around
23:00	0:00	1.00	POOH to run 16' surface casing
0:00			
0:00			
0:00			
0:00			
0:00			Held prespud meeting on 12/9/04. On location.
0:00			In attendace, Steve Hash, Exact Engineering - Darren Naylor, Exact Engineering - Chuck Sanders, Pat Ubanks,
0:00			Unit 111 Tool pushers - Greg Sjaastad, Anchor Drilling Fluids - David Alan, Weatherford Directional Services
0:00			
Daily Total	24.00		

CONFIDENTIAL

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
12/09/04	Wolverine Federal 17-3	Unit Rig #111	Sevier, UT		43-041-30036	Darren Naylor	
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
	Rigging up	140			#DIV/0!		6550' / 7100'

MUD DATA

[illegible]

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA	IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
															T	B	G
											#DIV/0!						
											#DIV/0!						
											#DIV/0!						
											#DIV/0!						

HYDRAULICS

[illegible]

SLOW PUMP

		60 spm	80 spm	100 spm
1				
2				

DRILL STRING

[illegible]

GEOLOGIC

FORMATION	MD	TVD	LITHOLOGY
GAS DATA			
BOTTOMS UP TIME	BG GAS	CONN GAS	TRIP GAS
SHOWS			
GAS UNITS	FROM	TO	ROP (F1/HR)
GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG

GENERAL INFO

RIG INFO	
Rig No	
Cell Nc	
Last BOP Test	
Next BOP Test	
Last Safety Meeting	
Last BOP Drill	
Last Operate Pipe Ram	
Last Operate Blind Ram	
Last Operate Annular	
LAST CASING	NEXT CASING
20" @ 120' BGL	16" @ 600'

SURVEYS

[illegible]

DAILY ACTIVITY

FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT
0:00			
0:00			Well Name: Wolverine Federal 17-3
0:00			Surface location: SE/4 - NW/4; 1680 FNL & 2233' FWL of Sec 17, T23S - R01W, SLB&M Svy, Sevier Co, UT
0:00			Target BHL: NW/4 SW/4 Sec 17; 1980' FSL & 660' FWL @ top of Navajo 1 @ ~ 5800'
0:00			
0:00			
0:00	18:00	18.00	12/8/04 Continue to rig up, Work on pumps 22:00 12/8/04 to 18:00 12/9/04 = 20 hrs
18:00			Start Rig Operational test @ 18:00 hrs. 12/9. Ran both pumps @ 120 spm pumping @ 780 GPM. Tested mud lines to 1500'
	23:00	5.00	Checked & ran all solids control equipment @ same rate. Shakers, Drilling nipple, Flowline, Desander, Desilter & Centerfuge
23:00	0:00	1.00	Start picking up BHA
0:00			
0:00			
0:00			Note: BLM & UDOGM notified of pending spud
0:00			
0:00			
0:00			
0:00			
Daily Total		24.00	

Engineering & Supervision				EXACT Engineering, Inc.				(918) 599-9400									
Operator: Wolverine G&O Co of Utah, LLC				DAILY DRILLING REPORT				24 hrs - midnight to midnight									
DATE 12/08/04		WELL Wolverine Federal 17-3		CONTRACTOR Unit Rig #111		COUNTY, STATE Sevier, UT		SPUD DATE		API# 43-041-30036		SUPERVISOR Darren Naylor					
DAYS F/ SPUD		PRESENT OPERATIONS @ MIDNIGHT Rigging up		TOTAL DEPTH		PROGRESS		DRILLING TIME		ROP #DIV/0!		AUTH. DEPTH 6550' / 7100'					
MUD DATA																	
WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM		
BIT DATA																	
BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA		IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION T B G	
												#DIV/0!					
												#DIV/0!					
												#DIV/0!					
												#DIV/0!					
HYDRAULICS														SLOW PUMP			
PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD			60 spm	80 spm	100 spm
1						0							1				
2						0							2				
Both				0	0	0											
DRILL STRING				GEOLOGIC								GENERAL INFO					
BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION		MD	TVD		LITHOLOGY		RIG INFO					
												Rig No					
												Cell No					
												Last BOP Test					
												Next BOP Test					
												Last Safety Meeting					
												Last BOP Drill					
												Last Operate Pipe Ran					
												Last Operate Blind Ran					
												Last Operate Annular					
Total BHA:		0.00															
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION		GL TO KB	KB ELEVATION		INTERMEDIATE CSG		LAST CASING		NEXT CASING			
SURVEYS																	
MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL
								MWD									MWD
								MWD									MWD
DAILY ACTIVITY																	
FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT														
12:00																	
0:00			Well Name: Wolverine Federal 17-3														
0:00			Well Location: SE/4 - NW/4; 1680 FNL & 2233' FWL of Sec 17, T23S - R01W , SLB&M Svy, Sevier Co, UT														
0:00																	
0:00																	
0:00																	
0:00			12/8/04 Continue to rig up, @ 10:pm The pusher informed me of a problem with one of the pump motors.														
0:00			this am, waiting on mechanic, will spud depending on outcome, should be today sometime.														
0:00																	
0:00																	
0:00																	
0:00																	
0:00																	
0:00																	
0:00																	
0:00																	
0:00																	
Daily Total		0.00															

Engineering & Supervision						EXACT Engineering, Inc.								(918) 599-9400								
Operator: Wolverine G&O Co of Utah, LLC						DAILY DRILLING REPORT										24 hrs - midnight to midnight						
DATE 12/07/04		WELL Wolverine Federal 17-3			CONTRACTOR Unit Rig #111			COUNTY, STATE Sevier, UT		SPUD DATE		API# 43-041-30036			SUPERVISOR Darren Naylor							
DAYS F / SPUD		PRESENT OPERATIONS @ MIDNIGHT Rigging up			TOTAL DEPTH			PROGRESS		DRILLING TIME		ROP #DIV/O!		FORMATION		AUTH. DEPTH 6550' / 7100'						
MUD DATA																						
WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM							
BIT DATA																						
BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA	IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION T B G							
											#DIV/O!											
											#DIV/O!											
											#DIV/O!											
											#DIV/O!											
HYDRAULICS																						
PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN²	ECD	SLOW PUMP									
1						0							1	60 spm	80 spm	100 spm						
2						0							2									
Both				0	0	0																
DRILL STRING																						
BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION		MD		TVD	LITHOLOGY		GENERAL INFO RIG INFO										
												Rig No										
												Cell Nr										
												Last BOP Test										
												Next BOP Test										
												Last Safety Meeting										
												Last BOP Drill										
												Last Operate Pipe Ran										
												Last Operate Blind Ran										
												Last Operate Annular										
Total BHA:		0.00																				
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION		GL TO KB		KB ELEVATION	INTERMEDIATE CSG		LAST CASING NEXT CASING										
SURVEYS																						
MD	INCL.	AZIMUTH	TVD	SECTION	N + S-	E + W-	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	SECTION	N + S-	E + W-	DLS	TOOL					
								MWD									MWD					
								MWD									MWD					
DAILY ACTIVITY																						
FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT																			
12:00																						
0:00			Well Name: Wolverine Federal 17-3																			
0:00			Well Location: SE/4 - NW/4; 1680 FNL & 2233' FWL of Sec 17, T23S - R01W , SLB&M Svy, Sevier Co, UT																			
0:00																						
0:00																						
0:00																						
0:00																						
0:00			12/07/04 welded on 20" drilling nipple, continued rig up, filling pits with wtr this am, expect to spud this pm																			
0:00																						
0:00																						
0:00																						
0:00																						
0:00																						
0:00																						
0:00																						
0:00																						
0:00																						
0:00																						
Daily Total		0.00																				

Engineering & Supervision						EXACT Engineering, Inc.							(918) 599-9400																		
Operator: Wolverine G&O Co of Utah, LLC											DAILY DRILLING REPORT											24 hrs - midnight to midnight									
DATE 12/06/04		WELL Wolverine Federal 17-3				CONTRACTOR Unit Rig #111				COUNTY, STATE Sevier, UT		SPUD DATE		API# 43-041-30036				SUPERVISOR Darren Naylor													
DAYS F / SPUD		PRESENT OPERATIONS @ MIDNIGHT Rigging up				TOTAL DEPTH		PROGRESS		DRILLING TIME		ROP #DIV/0!		FORMATION		AUTH. DEPTH 6550' / 7100'															
MUD DATA																															
WT		VIS.		WL		CK		PH		SAND		SOLIDS %		PV		YP		GELS		DEPTH		DATE/TIME		CHLORIDES		CALCIUM		MBT		SALT PPM	
BIT DATA																															
BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA				IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION													
															#DIV/0!				T	B	G										
															#DIV/0!																
															#DIV/0!																
															#DIV/0!																
HYDRAULICS																				SLOW PUMP											
PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN²	ECD		60 spm	80 spm	100 spm															
1						0								1																	
2						0								2																	
Both				0	0	0																									
DRILL STRING										GEOLOGIC										GENERAL INFO											
BOTTOMHOLE ASSEMBLY				LENGTH		O.D.		I.D.		FORMATION		MD		TVD		LITHOLOGY		RIG INFO													
																		Rig No													
																		Cell Nc													
																		Last BOP Test													
																		Next BOP Test													
																		Last Safety Meeting													
																		Last BOP Drill													
																		Last Operate Pipe Ran													
																		Last Operate Blind Ran													
																		Last Operate Annular													
Total BHA:		0.00																LAST CASING													
STRING WT.		BHA WT.		PU WT.		SO WT.		ROT. TORQUE		GRD. ELEVATION		GL TO KB		KB ELEVATION		INTERMEDIATE CSG		NEXT CASING													
SURVEYS																															
MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL														
								MWD										MWD													
								MWD										MWD													
DAILY ACTIVITY																															
FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT																												
12:00																															
0:00			Well Name: Wolverine Federal 17-3																												
0:00			Well Location: SE/4 - NW/4; 1680 FNL & 2233' FWL of Sec 17, T23S - R01W , SLB&M Svy, Sevier Co, UT																												
0:00																															
0:00																															
0:00																															
0:00																															
0:00			12/06/04 Raised derrick, rig & camp running, man camps on location, still rigging up																												
0:00																															
0:00																															
0:00																															
0:00																															
0:00																															
0:00																															
0:00																															
0:00																															
0:00																															
0:00																															
Daily Total		0.00																													

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE 12/05/04	WELL Wolverine Federal 17-3	CONTRACTOR Unit Rig #111	COUNTY, STATE Sevier, UT	SPUD DATE	API# 43-041-30036	SUPERVISOR Darren Naylor
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT Rigging up	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP #DIV/0!	FORMATION AUTH. DEPTH 6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA	IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION T B G
											#DIV/0!				
											#DIV/0!				
											#DIV/0!				
											#DIV/0!				

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD	60 spm	80 spm	100 spm
1						0							1		
2						0							2		
Both				0	0	0									

SLOW PUMP

DRILL STRING

BOTTOMHOLE ASSEMBLY	LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO
								Rig No
								Cell Nc
								Last BOP Test
								Next BOP Test
								Last Safety Meeting
								Last BOP Drill
								Last Operate Pipe Ram
								Last Operate Blind Ram
								Last Operate Annular
Total BHA:	0.00							
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG
								LAST CASING
								NEXT CASING

GEOLOGIC

GENERAL INFO

SURVEYS

MD	INCL	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL	MD	INCL	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL
								MWD									MWD
								MWD									MWD

DAILY ACTIVITY

FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT
12:00			
0:00			Well Name: Wolverine Federal 17-3
0:00			Well Location: SE/4 - NW/4; 1680 FNL & 2233' FWL of Sec 17, T23S - R01W, SLB&M Svy, Sevier Co, UT
0:00			Operator: Wolverine Gas and Oil Company of Utah, LLC Grand Rapids, MI main office
0:00			Surface Owner: Wolverine Gas & Oil Co of Utah, LLC
0:00			
0:00			
0:00			12/01/04 Begin moving in - 7 loads
0:00			12/02/04 Moving in
0:00			12/03/04 Moving in - started setting sub
0:00			12/04/04 Moving in
0:00			12/05/04 Finished moving in, rig set in, will raise derrick tomorrow, expect spud Tuesday 12/7
0:00			
0:00			
0:00			
0:00			
0:00			
Daily Total	0.00		

EXACT Engineering, Inc.

www.exactengineering.com

415 S. Boston Ave., Suite 734, Tulsa, OK 74103 • (918) 599-9400 • (918) 599-9401 (fax)

Steven R. Hash, P.E.
 Registered Professional Engineer
 stevehash@exactengineering.com

January 15, 2005

Wolverine Gas and Oil Co. of Utah, LLC
 Covenant Field Production Office
 P.O. Box 570031
 Sigurd, Utah 84657

Re: Covenant Field – Lease UTU-73528
 SITE SECURITY PLAN

Gentlemen,

Please find enclosed a binder titled SITE SECURITY PLAN for COVENANT FIELD, the contents of which are prepared to assist with the Operator's compliance with the U.S. Bureau of Land Management's ("BLM") Onshore Oil and Gas Order No. 3 (copy enclosed) pertaining to the minimum standards for site security by providing a system for production accountability. This Order covers the use of seals, by-passes around meters, self inspection, transporter's documentation, reporting of incidents of unauthorized removal or mishandling of oil and condensate, facility diagrams, recordkeeping and site security plans. It identifies specific acts of non-compliance and establishes time allotments for implementation of corrective action(s). Penalties are provided by law for failure to comply.

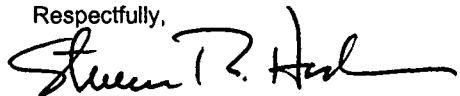
This plan shall be maintained at the temporary site of the Wolverine Covenant Field Production Office located 3-1/2 miles south of Sigurd, UT in Sevier County. Any Authorized Officer of the BLM may inspect the subject facility and review this plan at any reasonable time without advance notice. Construction of the subject facility is ongoing, however, it was completed sufficiently for initial use on November 20, 2004. First Oil Sales through this facility occurred on November 24, 2004

For purposes of this plan the "site" shall be considered to include all equipment, piping and valves necessary to accommodate the daily production of oil and or gas from the KMR #17-1 and WF #17-2 wells including the wellhead, flowlines, treater facility and containment area, stock tank and service tank battery and truck sales outlet. A schematic outlining these facilities is shown in the Facility Diagram included in the plan binder. As wells are added or deleted from this facility this Plan will be revised to reflect these changes. Operating personnel in responsible charge of this facility shall be familiar with all portions of this plan and insure adherence to the plan. Any instances of non-compliance should be reported to the Supervisor.

Production volumes, measurements and transport records shall be maintained in accordance with API Recommended Methods and standard industry practices. These records shall be maintained at the facility for the current production month and transmitted (preferably daily but weekly at a minimum) to the Operator's headquarter office where they should be maintained for a period of at least six (6) years. The Operator shall inspect the facility at six (6) month intervals to insure compliance with all of the requirements herein.

By copy of this letter, the Utah State Office of the U.S. Bureau of Land Management is being notified of the existence of this new plan, it's location and the construction of this new facility.

Respectfully,



Steven R. Hash

Xc: Mr. Al McKee, Bureau of Land Management, Utah State Office, 324 S. State St. Suite 401, Salt Lake City, UT 84111
 Mr. Dustin Doucet, Utah Division of Oil, Gas & Mining, 1594 West North Temple, Suite 1210, Salt Lake City, UT 84114
 Mr. Ed Higuera, Wolverine Gas & Oil Corp, One Riverfront Plaza, 55 Campau, NW, Grand Rapids, MI 49503-2616

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Petroleum Engineering Consulting, Personnel & Jobsite Supervision
 complete well design, construction & management, drilling, completion, production, pipelines, appraisals,
 due diligence, acquisitions, procedures, temporary personnel and field supervision

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB No. 1004-0137
Expires: March 31, 2007

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE- Other instructions on reverse side.

1. Type of Well <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other		5. Lease Serial No. UTU-73528
2. Name of Operator Wolverine Gas & Oil Co of Utah, LLC		6. If Indian, Allottee or Tribe Name
3a. Address One Riverfront Plaza, 55 Campau NW, Grand Rapids, MI	3b. Phone No. (include area code) 616-458-1150	7. If Unit or CA/Agreement, Name and/or No. Wolverine Fed Exploration Unit
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) SHL: 1680' FNL & 2233' FWL BHL: 1980' FSL & 660' FWL		8. Well Name and No. Wolverine Federal #17-3
		9. API Well No. 43-041-30036
		10. Field and Pool, or Exploratory Area Covenant Field
		11. County or Parish, State Sevier Co, UT

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

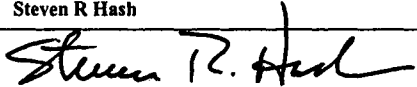
TYPE OF SUBMISSION	TYPE OF ACTION				
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off	
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity	
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other Abandon Log Tool	
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	with nuclear source	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal		

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

The tool abandonment operation reported below was granted verbal approval by Al McKee by phone on 1/23/05. After multiple fishing attempts to retrieve a stuck open-hole logging tool (Halliburton) from the subject well the tool was permanently abandoned on 1/24/05 in accordance with standard industry practices; the procedure being also approved by the U.S. Nuclear Regulatory Commission (NRC). The well was drilled (8-1/2" diameter hole) to total depth of 7150' on 1/17/05 with 9-5/8" intermediate casing set and cemented at 5828'. During open hole logging operations the logging tool became stuck at total depth. 4 fishing attempts over a 5 day period resulted in only partial recovery of the tool. 50 ft of tool remained in the well from 7150' to 7100' including a radioactive source of Cesium 137 which remained intact. Halliburton Global Lead Radiation Safety Officer, Dwaine Brown (dwaine.brown@halliburton.com) notified the NRC of the pending abandonment and obtained appropriate authority and methodology. A section of steel drill collar 6-1/2" OD x 5.38' long was welded on the bottom of the 5-1/2" production casing string which was then run to the top of fish @ 7100'. The casing was cemented with 680 sx of 50/50 POZ cement, the last 10 bbls of which contained red dye. Therefore, there is now 54' of red cement plus the steel drill collar covering the fish and preventing its accidental contact over the remaining life of the well.

PLEASE MAINTAIN ALL INFORMATION CONTAINED HEREIN CONFIDENTIAL - thank you

JAN 26 2005

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) Steven R Hash		Title Consulting Engineer - EXACT Engineering Inc
Signature 		Date 01/24/2005

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Title Office	Date
--	-----------------	------

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

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EXACT Engineering, Inc.

www.exactengineering.com

415 S. Boston Ave., Suite 734, Tulsa, OK 74103 • (918) 599-9400 • (918) 599-9401 (fax)

Steven R. Hash, P.E.
Registered Professional Engineer
stevehash@exactengineering.com

CONFIDENTIAL PLEASE!

January 18, 2005

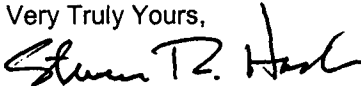
Mr. Dustin Doucet
Utah Division of Oil, Gas & Mining
1594 West North Temple, Suite 1210
Salt Lake City, UT 84114-5801

Re: Wolverine Federal 17-3 well
Sec 17 T23S R01W
Sevier Co., UT
API# 43-041-30036

Dear Mr. Doucet,

On behalf of Wolverine Gas and Oil Company of Utah, LLC, please find enclosed daily activity reports for the subject well from December 18, 2004 (spud Dec 10, 2004) through January 18, 2005. Our present status is fishing logging tool at 7150' TD. We respectfully request that the enclosed information remain confidential.

Very Truly Yours,



Steven R. Hash
Consulting Engineer for Wolverine Gas and Oil Company of Utah, LLC

copy without enclosures via email to:

Wolverine Gas & Oil Co of Utah, LLC:	Richard Moritz, Sue Benson
EXACT Engineering, Inc.	well file

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Petroleum Engineering Consulting, Personnel & Jobsite Supervision
complete well design, construction & management, drilling, completion, production, pipelines, appraisals,
due diligence, acquisitions, procedures, temporary personnel and field supervision

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
01/17/05	Wolverine Federal 17-3	Unit Rig #111	Sevier, UT	10-Dec	43-041-30036	Darren Naylor	
DAYS FI SPUD	PRESENT OPERATIONS @ MIDNIGHT	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
39	work stuck logging tool	7,150			#VALUE!	Navajo	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
10.3	41	10.0	2/32	9.0	0.50	2.8	7	6	5/6	7150	1/17/08:30	200,000	1050	##	330,000

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA		IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT*MTR	WOB	DULL CONDITION		
						T	B									G		
												#DIV/0!						
												#DIV/0!						
												#DIV/0!						
												#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD	Flow Rate (GPM)			
													50 gpm	80 gpm	100 gpm	120 gpm
1	National	6	8.5	2.97	123	365							1	400		
2	National	6	8.5	2.97	0	0							2	400		
Both				5.94	123	365	172	189	1500	150						

~~SLOW PUMP~~

		60 spm	80 spm	100 spm
1		400		
2		400		

DRILL STRING

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.
8 1/2" bit		1.00		
6 1/2 motor		30.00		
23 5" HWDP		694.00		
Jar		32.00		
3 5" HWDP		90.00		
Total BHA:		847.00		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE
160	50	200	130	200

GEOLOGIC

FORMATION	MD	TVD	LITHOLOGY
Navajo	6,501	5,984	
GAS DATA			
BOTTOMS UP TIME	B/G GAS	CONN GAS	TRIP GAS
53	1 to 25	0	0
SHOWS			
GAS UNITS	FROM	TO	ROP (FT/HR)
GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG
5,736	17	5,753	

GENERAL INFO

RIG INFO	
Rig No	Unit 111
Cell Nr	918-645-6671
Last BOP Test	1/7
Next BOP Test	2/7
Last Safety Meeting	1/17
Last BOP Drill	1/16
Last Operate Pipe Ram	1/17
Last Operate Blind Ram	1/17
Last Operate Annular	1/7
LAST CASING	NEXT CASING
5828	TD

SURVEYS

[illegible]

DAILY ACTIVITY

FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT
0:00	6:00	2.50	Work stuck tool, wait on cut & thread tools.
6:00	7:30	1.50	Safety meeting w/ all personel
7:30	11:00	3.50	Cut line RU to strip over
11:00	18:00	7.00	Strip over line to logging tool
18:00	19:00	1.00	RU & Circ. Overshot check up & down wts.
19:00	0:00	5.00	Latch on to logging tool, try to work free, pulling 50k up working down 25k.
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			6 am. Burn line & retrieve wire out of hole
0:00			
0:00			
0:00			
Daily Total		20.50	

(918) 599-9400

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#		SUPERVISOR	
01/17/05	Wolverine Federal 17-3	Unit Rig #111	Sevier, UT	10-Dec	43-041-30036		Darren Naylor	
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
39	WO cut & thread tools		7,150	96	5.50	17.5	Navajo	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
10.3	41	10.0	2/32	9.0	0.50	2.8	7	6	5/6	7150	1/17/08:30	200,000	1050	##	330,000

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B	G											
RR7	8.500	SEC	XS20S	517x	10550427	16	16	16	6854	7150	296	13.50	21.9	Y	140	35	8	E	1/8
													#DIV/0!						
													#DIV/0!						
													#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD	Flow Rate (GPM)			
													60 gpm	80 gpm	100 gpm	120 gpm
1	National	6	8.5	2.97	123	365							1	400		
2	National	6	8.5	2.97	0	0							2	400		
Both				5.94	123	365	172	189	1500	150						

~~SLOW PUMP~~

		60 spm	80 spm	100 spm
1	400			
2	400			

DRILL STRING

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.
8 1/2" bit		1.00		
6 1/2 motor		30.00		
23 5" HWDP		694.00		
Jar		32.00		
3 5" HWDP		90.00		
Total BHA:		847.00		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE
160	50	200	130	200

GEOLOGIC

FORMATION	MD	TVD	LITHOLOGY
Navajo	6,501	5,984	
GAS DATA			
BOTTOMS UP TIME	BG GAS	CONN GAS	TRIP GAS
53	1 to 25	0	0
SHOWS			
GAS UNITS	FROM	TO	ROP (FT/HR)
GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG
5,736	17	5,753	

GENERAL INFO

RIG INFO	
Rig No	Unit 111
Cell Nr	918-645-6671
Last BOP Test	1/7
Next BOP Test	2/7
Last Safety Meeting	1/17
Last BOP Drill	1/16
Last Operate Pipe Ram	1/17
Last Operate Blind Ra	1/17
Last Operate Annular	1/7
LAST CASING	NEXT CASING
5828	TD

SURVEYS

[illegible]

DAILY ACTIVITY

FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT
0:00	2:30	2.50	Drill 7054 to 7150
2:30	4:30	2.00	Circulate & condition for logs
4:30	5:30	1.00	POOH to shoe
5:30	6:30	1.00	RIH 2' fill
6:30	12:00	5.50	POOH f/ logs
12:00	12:30	0.50	Safety meeting w/ Haliburton logging crew & Unit rig crew
12:30	13:30	1.00	Rig up loggers, Rig service
13:30	14:30	1.00	Logging, loggers TD 7142, 1st. pass went well.
14:30	15:00	0.50	Went back to btm. for repeat section, started off btm. tool stuck
15:00	0:00	9.00	Work stuck tool, wait on cut & thread tools.
0:00			
0:00			
0:00			
0:00			6 am. WO stripping tools
0:00			
0:00			
0:00			
0:00			
Daily Total		24.00	

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR		COUNTY, STATE	SPUD DATE	API#		SUPERVISOR
01/16/05	Wolverine Federal 17-3	Unit Rig #111		Sevier, UT	10-Dec	43-041-30036		Darren Naylor
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
38	Drilling		7,054	200	8.00	25.0	Navajo	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
10.1	40	8.0	2/32	9.5	0.50	2.0	9	6	4/5	6875	1/16/08:30	200,000	1080	##	330,000

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B	G											
RR7	8.500	SEC	XS20S	517x	10550427	16	16	16	6854		200	8.00	25.0	Y	140	35			
													#DIV/0!						
													#DIV/0!						
													#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL. / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD	Flow Rate (GPM)			
													60 spm	80 spm	100 spm	
1	National	6	8.5	2.97	123	365							1	400		
2	National	6	8.5	2.97	0	0							2	400		
Both				5.94	123	365	172	189	1500	150						

~~SLOW PUMP~~

		60 spm	80 spm	100 spm
	1	400		
	2	400		

DRILL STRING

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.
8 1/2" bit		1.00		
6 1/2 motor		30.00		
23 5" HWDP		694.00		
Jar		32.00		
3 5" HWDP		90.00		
Total BHA:		847.00		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROY. TORQUE
160	50	200	130	200

GEOLOGIC

FORMATION	MD	TVD	LITHOLOGY
Navajo	6,501	5,984	
GAS DATA			
BOTTOMS UP TIME	BG GAS	CORN GAS	TRIP GAS
53	1 to 25	0	0
SHOWS			
GAS UNITS	FROM	TO	ROP (FT/HR)
GRD. ELEVATION			
GL TO KB	KB ELEVATION	INTERMEDIATE CSG	
5,736	17	5,753	

GENERAL INFO

RIG INFO	
Rig No	Unit 111
Cell Nr	918-645-6671
Last BOP Test	1/7
Next BOP Test	2/7
Last Safety Meeting	1/16
Last BOP Drill	1/16
Last Operate Pipe Ram	1/14
Last Operate Blind Ram	1/14
Last Operate Annular	1/7
LAST CASING	NEXT CASING
5828	TD

SURVEYS

[illegible]

DAILY ACTIVITY

24 HOURS - MIDNIGHT TO MIDNIGHT			
FROM	TO	HRS	
0:00	5:30	5.50	PU bit & motor RIH
5:30	7:00	1.50	W&R 6690 to 6754
7:00	12:00	5.00	Drill 6754 to 6961
12:00	12:30	0.50	Check surface equipment, 400 psi. press loss
12:30	17:00	4.50	POOH to 3rd jt. HWDP
17:00	17:30	0.50	LD washed jt. HWDP, Kelly up check pressure.
17:30	20:30	3.00	RIH
20:30	21:00	0.50	Kelly up wash 30' to btm.
21:00	0:00	3.00	Drill 6961 to 7054
0:00			
0:00			
0:00			
0:00			
0:00			6 am. POOH f/ logs TD 7150 @ 02:30
0:00			
0:00			
0:00			
0:00			
Daily Total	24.00		

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#		SUPERVISOR	
01/15/05	Wolverine Federal 17-3	Unit Rig #111	Sevier, UT	10-Dec	43-041-30036		Darren Naylor	
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
37	Laying down core # 6		6,854	37	7.50	4.9	Navajo	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
10.1	39	11.2	2/32	10.0	0.50	2.0	7	4	3/4	6817	1/15/09:00	200,000	1100	##	330,000

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd) or TFA	IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT-MTR	WOB	DULL CONDITION		
															T	B	G
11	8.500	DPI	CUR77FD		2016628	0.9	6739	6797	58	8.00	7.3	n	75	25	1	1	1
R1	8.500	DPI	CUR77FD		2016628	0.9	6797	6817	20	3.50	5.7	n	70	20	1	1	1
R1	8.500	DPI	CUR77FD		2016628	0.9	6817	6854	37	7.50	4.9	n	65	28	1	1	1
											#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD		60 spm	80 spm	100 spm
1	National	6	8.5	2.97	100	297							1	400		
2	National	6	8.5	2.97	0	0							2	400		
Both				5.94	100	297	150	170	1100							

~~SLOW PUMP~~

		60 spm	80 spm	100 spm
1	400			
2	400			

DRILL STRING

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.
8 1/2" bit		1.00		
Core bbl.		65.73		
23 5" HWDP		694.00		
Jar		32.00		
3 5" HWDP		90.00		
Total BHA:		882.73		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE
155	50	175	135	185

GEOLOGIC

FORMATION	MD	TVD	LITHOLOGY
Navajo	6,501	5,984	
GAS DATA			
BOTTOMS UP TIME	BG GAS	CONN GAS	TRIP GAS
53	1 to 25	0	0
SHOWS			
GAS UNITS	FROM	TO	ROP (F1/HR)
GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG
5,738	17	5,753	

GENERAL INFO

RIG INFO	
Rig No	Unit 111
Cell Nr	918-645-6671
Last BOP Test	1/7
Next BOP Test	2/7
Last Safety Meeting	1/14
Last BOP Drill	1/13
Last Operate Pipe Ram	1/14
Last Operate Blind Ram	1/14
Last Operate Annular	1/7
LAST CASING	NEXT CASING
5828	TD

SURVEYS

[illegible]

DAILY ACTIVITY

FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT
0:00	4:30	4.50	POOH w/ core # 5
4:30	6:00	1.50	LD core # 5 recovered 20'
6:00	10:00	4.00	RIH f/ core # 6
10:00	10:30	0.50	Rig service
10:30	18:00	7.50	Core 6817 to 6854 35'
18:00	22:30	4.50	POOH w/ core # 6
22:30	0:00	1.50	LD core # 6 recovered 22'
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			6 am. Reaming @ 6836
0:00			
0:00			
0:00			
Daily Total	24:00		

CONFIDENTIAL

24 hrs - midnight to midnight

FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT
0:00	2:30	2.50	W&R 6625 to 6739
2:30	10:30	8.00	Core # 4, 6739 to 6797
10:30	11:00	0.50	Rig service
11:00	15:00	4.00	POOH w/ core # 4
15:00	16:00	1.00	Lay down core # 4 recovered 57'
16:00	20:30	4.50	RIH f/ core # 5
20:30	0:00	3.50	Core 6797 to 6817
0:00			
0:00			
0:00			
0:00			
0:00			6 am. Laying down core # 5 cut 20' jammed
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
Daily Total	24.00		

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#		SUPERVISOR
01/13/05	Wolverine Federal 17-3	Unit Rig #111	Sevier, UT	10-Dec	43-041-30036		Darren Naylor
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
35	RIH f/ core #4	6,739	50	4.50	11.1	Navajo	6550' / 7100'

MUD DATA

WT	VIS	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
10.2	38	13.6	2/32	11.0	0.50	2.5	8	6	5/6	6721	1/13/10:30	195,000	1040	##	321,750

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B	G											
RR7	8.500	SEC	XS20S	517x	10550427	16	16	16	6689	6739	50	4.50	11.1	y	140	35	3	3	1/8
													#DIV/0!						
													#DIV/0!						
													#DIV/0!						

HYDRAULICS

SLOW PUMP

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV OC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD	60 spm	80 spm	100 spm
1	National	6	8.5	2.97	125	371							1	400	
2	National	6	8.5	2.97	0	0							2	400	
Both				5.94	125	371	177	195	1500	200					

DRILL STRING

GEOLOGIC

GENERAL INFO

BOTTOMHOLE ASSEMBLY	LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO
8 1/2" bit	1.00			Navajo	6,501	5,984		Rig No Unit 111
6 1/2 motor	30.00							Cell No 918-645-6671
23 5" HWDP	694.00							Last BOP Test 1/7
Jar	32.00							Next BOP Test 2/7
3 5" HWDP	90.00							Last Safety Meeting 1/13
								Last BOP Drill 1/13
								Last Operate Pipe Ra 1/13
								Last Operate Blind Ra 1/13
								Last Operate Annular 1/7
Total BHA:	847.00							LAST CASING NEXT CASING
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG
155	50	175	135	185	5,738	17	5,753	5828 TD

SURVEYS

MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL

DAILY ACTIVITY

FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT
0:00	2:00	2.00	LD core # 3 recover 22'
2:00	7:00	5.00	PU bit & motor RIH
7:00	8:00	1.00	W&R 8600 to 6689
8:00	12:30	4.50	Drill 6689 to 6739
12:30	13:30	1.00	Circ. Btms. Up
13:30	18:00	4.50	POOH for core barrel
18:00	0:00	6.00	LD bit & motor, load core barrel, RIH
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			6 am. Coring @ 6756 5' hr.
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			

CONFIDENTIAL

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
01/12/05	Wolverine Federal 17-3	Unit Rig #111	Sevier, UT	10-Dec	43-041-30036	Darren Naylor	
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
34	LD core # 3	6,689	23	11.00	2.1	Navajo	6550' / 7100'

MUD DATA

WT	VIS	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
10.0	39	12.0	2/32	11.0	0.50	2.5	8	7	5/6	6671	1/12/09:30	188,000	1040	##	310,200

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA	IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM	WOB	DULL CONDITION		
10	8.500	DPI	301		1963321	0.9	6666	6689	23	11.00	2.1	n	80	25	3	3	1
											#DIV/0!						
											#DIV/0!						
											#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD	SLOW PUMP		
1	National	6	8.5	2.97	95	282							1	400	
2	National	6	8.5	2.97	0	0							2	400	
Both				5.94	95	282	133	146	900						

DRILL STRING

GEOLOGIC

GENERAL INFO

BOTTOMHOLE ASSEMBLY	LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO	
8 1/2" bit	1.00			Navajo	6,501	5,984		Rig No	Unit 111
Core assembly	68.00							Cell Nr	918-645-6671
23 5" HWDP	694.00							Last BOP Test	1/7
Jar	32.00							Next BOP Test	2/7
3 5" HWDP	90.00							Last Safety Meeting	1/11
								Last BOP Drill	1/11
								Last Operate Pipe Rar	1/11
								Last Operate Blind Ra	1/11
								Last Operate Annular	1/7
Total BHA:	885.00							LAST CASING	NEXT CASING
STRING WT.	BHA WT.	PU WT.	SO WT.	ROY. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	
150	50	170	135	185	5,736	17	5,753	5828	TD

SURVEYS

MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL

DAILY ACTIVITY

FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT
0:00	1:00	1.00	Wait on bit, Weather closed I80
1:00	7:00	6.00	Make up bit, load barrel, RIH.
7:00	16:30	9.50	Core 6666 to 6684
16:30	17:00	0.50	Rig service
17:00	18:30	1.50	Core 6684 to 6689
18:30	23:00	4.50	POOH w/ core # 3
23:00	0:00	1.00	LD core
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			6 am Running in hole w/ bit to drill 50'
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
Daily Total		24.00	

CONFIDENTIAL

(918) 599-9400

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
01/11/05	Wolverine Federal 17-3	Unit Rig #111	Sevier, UT	10-Dec	43-041-30036	Darren Naylor	
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
33	WO core bit	6,666	23	14.00	1.6	Navajo	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
10.1	36	14.8	2/32	10.8	0.50	2.8	7	7	5/6	6657	1/11/7:45	198,000	1069	##	326,700

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd) or TFA		IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
																T	B	G
9	8.500	DPI	401		1962490		0.9	6643	6666	23	14.00	1.6	n	80	25	3	3	1
												#DIV/0!						
												#DIV/0!						
												#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECO	Flow Rate (gpm)			
													1	60 spm	80 spm	100 spm
1	National	6	8.5	2.97	95	282							1	400		
2	National	6	8.5	2.97	0	0							2	400		
Both				5.94	95	282	133	146	900							

~~SLOW PUMP~~

	60 spm	80 spm	100 spm
1	400		
2	400		

DRILL STRING

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.
8 1/2" bit		1.00		
Core assembly		68.00		
23 5" HWDP		694.00		
Jar		32.00		
3 5" HWDP		90.00		
Total BHA:		885.00		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROY. TORQUE
150	50	170	135	185

GEOLOGIC

FORMATION	MD	TVD	LITHOLOGY
Navajo	6,501	5,984	
GAS DATA			
BOTTOMS UP TIME	B/G GAS	CONN GAS	TRIP GAS
53	1 to 25	0	0
SHOWS			
GAS UNITS	FROM	TO	ROP (FT/HR)
GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG
5,736	17	5,753	

GENERAL INFO

RIG INFO	
Rig No	Unit 111
Cell No	918-645-6671
Last BOP Test	1/7
Next BOP Test	2/7
Last Safety Meeting	1/11
Last BOP Drill	1/11
Last Operate Pipe Ram	1/11
Last Operate Blind Ra	1/11
Last Operate Annular	1/7
LAST CASING	NEXT CASING
5828	TD

SURVEYS

[illegible]

DAILY ACTIVITY

FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT
0:00	1:30	1.50	RIH to 6643
1:30	15:30	14.00	Core 6643 to 6666
15:30	21:30	6.00	POOH w/ core # 2, LD same
21:30	22:30	1.00	Cut drlg. Line
22:30	23:00	0.50	Rig service
23:00	0:00	1.00	Wait on bit, Weather closed 180
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			6 am Running in hole
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
Daily Total		24.00	

CONFIDENTIAL

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#		SUPERVISOR	
01/10/05	Wolverine Federal 17-3	Unit Rig #111	Sevier, UT	10-Dec	43-041-30036		Darren Naylor	
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
32	RIH w/ core #2		6,643	24	11.00	2.2	Navajo	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
10.1	41	12.0	2/32	10.0	0.50	2.5	13	11	7/9	6629	1/10/7:45	197,000	1560	##	325,050

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA	IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
															T	B	G
8	8.500	DPI	401		1962036	0.9	6619	6643	24	11.00	2.2	n	80	25	2	2	1
9	8.500	DPI	401			0.9	6643				#DIV/0!						
											#DIV/0!						
											#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD	Flow Rate (gpm)			
													1	80 spm	80 spm	100 spm
1	National	6	8.5	2.97	95	282							1	400		
2	National	6	8.5	2.97	0	0							2	400		
Both				5.94	95	282	133	146	900							

~~SLOW PUMP~~

		60 spm	80 spm	100 spm
	1	400		
	2	400		

DRILL STRING

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.
8 1/2" bit		1.00		
Core assembly		68.00		
23 5" HWDP		694.00		
Jar		32.00		
3 5" HWDP		90.00		
Total BHA:		885.00		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE
150	50	170	135	185

GEOLOGIC

FORMATION	MD	TVD	LITHOLOGY
Arapien			
GAS DATA			
BOTTOMS UP TIME	BG GAS	CONN GAS	TRIP GAS
53	1 to 25	0	0
SHOWS			
GAS UNITS	FROM	TO	ROP (FT/HR)
GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSD
5.736	17	5.753	

GENERAL INFO

RIG INFO	
Rig No	Unit 111
Cell Nr	918-645-6671
Last BOP Test	1/7
Next BOP Test	2/7
Last Safety Meeting	1/10
Last BOP Drill	1/8
Last Operate Pipe Ram	1/10
Last Operate Blind Ram	1/10
Last Operate Annular	1/7
LAST CASING	NEXT CASING
5828	ID

SURVEYS

[illegible]

DAILY ACTIVITY

FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT
0:00	1:00	1.00	RIH to 6534
1:00	4:30	3.50	W&R 6534 to 6619
4:30	15:30	11.00	Core 6619 to 6643 jammed after 24'
15:30	20:30	5.00	POOH w/ core # 1
20:30	22:30	2.00	LD core, reload barrel, change bit.
22:30	0:00	1.50	RIH
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			6 am coring @ 6653
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
Daily Total		24.00	

CONFIDENTIAL

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR		COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
01/09/05	Wolverine Federal 17-3	Unit Rig #111		Sevier, UT	10-Dec	43-041-30036	Darren Naylor	
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
31	RIH w/ core barrel		6,619	207	11.00	18.8	Navajo	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
10.1	40	14.4	2/32	8.5	0.50	2.9	10	17	8/10	6560	1/9/08:45	197,000	1560	##	325,050

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd) or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
																	T	B	G
7	8.500	Sec	xs20s	447	10550427	16	16	16	5828	6619	791	35.50	22.3	y	150	35	4	2	1
													#DIV/0!						
													#DIV/0!						
													#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD	Flow Rate (GPM)			
													60 spm	80 spm	100 spm	120 spm
1	National	6	8.5	2.97	125	371							1	400		
2	National	6	8.5	2.97	0	0							2	400		
Both				5.94	125	371	175	192	1500	150						

~~SLOW PUMP~~

	60 spm	80 spm	100 spm
1	400		
2	400		

DRILL STRING

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.
8 1/2" bit		1.00		
Directional assembly		77.00		
23 5" HWDP		694.00		
Jar		32.00		
3 5" HWDP		90.00		
Total BHA:		894.00		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE
155	60	195	130	185

GEOLOGIC

FORMATION	MD	TVD	LITHOLOGY
Arapien			
GAS DATA			
BOTTOMS UP TIME	BG GAS	CONN GAS	TRIP GAS
	1 to 25	0	0
SHOWS			
GAS UNITS	FROM	TO	ROP (F/HR)
GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG
5.736	17	5.753	

GENERAL INFO

RIG INFO	
Rig No	Unit 111
Cell No	918-645-6671
Last BOP Test	1/7
Next BOP Test	2/7
Last Safety Meeting	1/8
Last BOP Drill	1/8
Last Operate Pipe Ram	1/7
Last Operate Blind Ram	1/7
Last Operate Annular	1/7
LAST CASING	NEXT CASING
5828	TD

SURVEYS

[illegible]

DAILY ACTIVITY

FROM	TO	HRS	
			24 HOURS - MIDNIGHT TO MIDNIGHT
0:00	11:00	11.00	Drill & survey 6412 to 6619
11:00	13:00	2.00	Circ. Samples & pump slug
13:00	14:00	1.00	Wiper trip to shoe
14:00	19:00	5.00	POOH
19:00	20:00	1.00	LD dtrc. Ass.
20:00	21:00	1.00	PU 60' core barrel
21:00	0:00	3.00	RIH for core # 1
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			4 am washing core barrel @ 6595'
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
Daily Total		24.00	

(918) 599-9400

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR		COUNTY, STATE	SPUD DATE	API#		SUPERVISOR
01/08/05	Wolverine Federal 17-3	Unit Rig #111		Sevier, UT	10-Dec	43-041-30036		Darren Naylor
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
30	Drilling @ 6412		6,412	570	23.50	24.3	Navajo	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
10.1	40	14.4	2/32	8.5	0.50	2.9	10	17	8/10	6560	1/9/08:45	197,000	1560	##	325,050

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B	G											
7	8.500	Sec	xs20s	447	10550427	16	16	16	5828	6619	791	35.50	22.3	y	150	35	4	2	1
													#DIV/0!						
													#DIV/0!						
													#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD		60 spm	80 spm	100 spm
1	National	6	8.5	2.97	125	371							1	400		
2	National	6	8.5	2.97	0	0							2	400		
Both				5.94	125	371	175	192	1500	150						

SLOW PUMP

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD		60 spm	80 spm	100 spm
1	National	6	8.5	2.97	125	371							1	400		
2	National	6	8.5	2.97	0	0							2	400		
Both				5.94	125	371	175	192	1500	150						

DRILL STRING

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO	
8 1/2" bit		1.00			Arapien				Rig No Unit 111	
Directional assembly		77.00							Cell No 918-645-6671	
23 5" HWDP		694.00							Last BOP Test	1/7
Jar		32.00			BOTTOMS UP TIME	BG GAS	GAS DATA CONN GAS	TRIP GAS	Next BOP Test 2/7	
3 5" HWDP		90.00				1 to 25	0	0	Last Safety Meeting 1/8	
					GAS UNITS	FROM	SHOWS TO	ROP (FT/HR)	Last BOP Drill 1/8	
									Last Operate Pipe Rm 1/7	
									Last Operate Blind Rm 1/7	
Total BHA:		894.00							Last Operate Annular 1/7	
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	LAST CASING	NEXT CASING
155	60	195	130	185	5,736	17	5,753		5828	TD

GEOLOGIC

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO	
8 1/2" bit		1.00			Arapien				Rig No Unit 111	
Directional assembly		77.00							Cell No 918-645-6671	
23 5" HWDP		694.00							Last BOP Test	1/7
Jar		32.00			BOTTOMS UP TIME	BG GAS	GAS DATA CONN GAS	TRIP GAS	Next BOP Test 2/7	
3 5" HWDP		90.00				1 to 25	0	0	Last Safety Meeting 1/8	
					GAS UNITS	FROM	SHOWS TO	ROP (FT/HR)	Last BOP Drill 1/8	
									Last Operate Pipe Rm 1/7	
									Last Operate Blind Rm 1/7	
Total BHA:		894.00							Last Operate Annular 1/7	
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	LAST CASING	NEXT CASING
155	60	195	130	185	5,736	17	5,753		5828	TD

GENERAL INFO

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO	
8 1/2" bit		1.00			Arapien				Rig No Unit 111	
Directional assembly		77.00							Cell No 918-645-6671	
23 5" HWDP		694.00							Last BOP Test	1/7
Jar		32.00			BOTTOMS UP TIME	BG GAS	GAS DATA CONN GAS	TRIP GAS	Next BOP Test 2/7	
3 5" HWDP		90.00				1 to 25	0	0	Last Safety Meeting 1/8	
					GAS UNITS	FROM	SHOWS TO	ROP (FT/HR)	Last BOP Drill 1/8	
									Last Operate Pipe Rm 1/7	
									Last Operate Blind Rm 1/7	
Total BHA:		894.00							Last Operate Annular 1/7	
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	LAST CASING	NEXT CASING
155	60	195	130	185	5,736	17	5,753		5828	TD

SURVEYS

[illegible]

DAILY ACTIVITY

FROM	TO	HRS	
24 HOURS - MIDNIGHT TO MIDNIGHT			
0:00	16:00	16.00	Drill 5842 to 6270
16:00	16:30	0.50	Rig service
16:30	0:00	7.50	Drill & survey 6270 to 6412
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
Daily Total		24.00	

CONFIDENTIAL

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR		COUNTY, STATE	SPUD DATE	API#		SUPERVISOR
01/07/05	Wolverine Federal 17-3	Unit Rig #111		Sevier, UT	10-Dec	43-041-30036		Darren Naylor
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
29	Drilling @ 5842		5,842	14	1.00	14.0	Arapien	6550' / 7100'

MOD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
10.3	45	33.0	2/32	8.5	0.50	3.8	6	3	2/3	5828	1/7/22:00	250,000	1680	##	320,000

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION			
																	T	B	G	
7	8.500	Sec	xs20s	447	10550427	16	16	16	5828			14	1.00	14.0	y	150	35			
														#DIV/0!						
														#DIV/0!						
														#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD		Flow Rate		
														60 spm	80 spm	100 spm
1	National	6	8.5	2.97	125	371							1	400		
2	National	6	8.5	2.97	0	0							2	400		
Both				5.94	125	371			1500							

SLOW PUMP

		60 spm	80 spm	100 spm
1		400		
2		400		

DRILL STRING

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.
8 1/2" bit		1.00		
Directional assembly		77.00		
23 5" HWDP		694.00		
Jar		32.00		
3 5" HWDP		90.00		
Total BHA:		894.00		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE
150	60	170	130	185

GEOLOGIC

	FORMATION	MD	TVD	LITHOLOGY
	Araplen			
		GAS DATA		
BOTTOMS UP TIME	BG GAS	CONN GAS	TRIP GAS	
	1 to 25	0	0	
		SHOWS		
GAS UNITS	FROM	TO	ROP (FT/HR)	
E	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG
	5,738	17	5,753	

GENERAL INFO

RIG INFO	
Rig No	Unit 111
Cell No	918-645-6671
Last BOP Test	1/7
Next BOP Test	2/7
Last Safety Meeting	1/7
Last BOP Drill	1/7
Last Operate Pipe Ram	1/7
Last Operate Blind Ram	1/7
Last Operate Annular	1/7
LAST CASING	NEXT CASING
5828	TD

SURVEYS

[illegible]

DAILY ACTIVITY

FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT
0:00	5:30	5.50	NU 11" 5M BOP stack
5:30	13:30	8.00	Pressure test BOPE. Pipe rams, blind rams, choke & kill lines, manifold & kelly valves to 5000 psi. Annular to 2500 psi.
13:30	17:30	4.00	PU directional ass. RIH w/ BHA
17:30	18:00	0.50	Test MWD
18:00	20:30	2.50	RIH
20:30	23:00	2.50	Drill float collar cement & shoe
23:00	0:00	1.00	Drill 5828 to 5842
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			7:00 am Drilling @ 6087
0:00			
0:00			
0:00			
0:00			
Daily Total		24.00	

(918) 599-9400

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#		SUPERVISOR
01/06/05	Wolverine Federal 17-3	Unit Rig #111	Sevier, UT	10-Dec	43-041-30036		Darren Naylor
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
28	Nipple up 11" 5M stack	5,828	0	0.00	#DIV/0!	Arapien	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
10.3	45	33.0	2/32	8.5	0.50	3.8	6	3	2/3	5828	1/6/09:00	175,000	1680	##	288,750

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA	IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
															T	B	G
											#DIV/0!						
											#DIV/0!						
											#DIV/0!						
											#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STR	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD				
													60 spm	80 spm	100 spm	
1	National	6	8.5	2.97	105	312							1			
2	National	6	8.5	2.97	105	312							2			
Both				5.94	210	624	123	127	2200							

SLOW PUMP

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STR	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD				
													60 spm	80 spm	100 spm	
1	National	6	8.5	2.97	105	312							1			
2	National	6	8.5	2.97	105	312							2			
Both				5.94	210	624	123	127	2200							

DRILL STRING

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO	
					Arapien				Rig No	Unit 111
									Cell Nr	918-645-6671
									Last BOP Test	1/6
					BOTTOMS UP TIME	BG GAS	GAS DATA CONN GAS	TRIP GAS	Next BOP Test	
					55	1 to 25	0	0	Last Safety Meeting 1/6	
					SHOWS				Last BOP Drill 1/3	
					GAS UNITS	FROM	TO	ROP (FT/HR)	Last Operate Pipe Ran 1/6	
									Last Operate Blind Ra 1/6	
									Last Operate Annular 1/6	
Total BHA:		0.00							Last CASING NEXT CASING	
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG		
					5,736	17	5,753		5828	TD

GEOLOGIC

GENERAL INFO

SURVEYS

[illegible]

DAILY ACTIVITY

FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT
0:00	4:00	4.00	Run 9 5/8" protective csng.
4:00	5:00	1.00	RU circ. Head wash 30' to btm.
5:00	6:00	1.00	RU cement head, test lines
6:00	8:30	2.50	Pump 730 sks. 50-50 poz cement
8:30	9:30	1.00	RD cementers
9:30	16:00	6.50	Nipple down 20" deverter & lines, cut off
16:00	19:00	3.00	Weld & test 9 5/8" csng. Head
19:00	0:00	5.00	NU 11" 5M BOP stack
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			7:00 am pressure testing BOPE
0:00			
0:00			
0:00			
Daily Total		24.00	

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR		COUNTY, STATE	SPUD DATE	API#		SUPERVISOR
01/05/05	Wolverine Federal 17-3	Unit Rig #111		Sevier, UT	10-Dec	43-041-30036		Darren Naylor
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
27	Running 9 5/8 csng.		5,828	0	0.00	#DIV/0!	Arapien	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
10.3	45	33.0	2/32	8.5	0.50	3.8	6	3	2/3	5828	1/5/10:00	175,000	1680	##	288,750

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd) or TFA	IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
															T	B	G
											#DIV/0!						
											#DIV/0!						
											#DIV/0!						
											#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STR	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HPH / IN ²	ECD		60 spm	80 spm	100 spm
1	National	6	8.5	2.97	105	312							1			
2	National	6	8.5	2.97	105	312							2			
Both				5.94	210	624	123	127	2200							

SLOW PUMP

	60 spm	80 spm	100 spm
1			
2			

DRILL STRING

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.
12 1/4 bit		1.00	12.250	
Bit sub		2.50	8.000	
12 1/8 Watermelon mill		5.30	8.000	
XO		2.00	7.750	
6 - 6 5/8 spiral wt.		180.00	7.750	
26 - 5" spiral wt.		789.00	5.000	
jar		32.00	6.500	
Total BHA:		1,011.80		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE
150	60	180	120	250

GEOLOGIC

	FORMATION	MD	TVD	LITHOLOGY
	Arapien			
GAS DATA				
BOTTOMS UP TIME	BG GAS	CONN GAS	TRIP GAS	
55	1 to 25	0	0	
SHOWS				
GAS UNITS	FROM	TO		ROP (FT/HR)
GRD. ELEVATION	GL TO KB	KB ELEVATION		INTERMEDIATE CSG
5,736	17	5,753		

GENERAL INFO

RIG INFO	
Rig No	Unit 111
Cell No	918-645-6671
Last BOP Test	12/14
Next BOP Test	
Last Safety Meeting	1/5
Last BOP Drill	1/3
Last Operate Pipe Ram	
Last Operate Blind Ra	
Last Operate Annular	1/4
LAST CASING	NEXT CASING
615	5800

SURVEYS

[illegible]

DAILY ACTIVITY

FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT
0:00	3:00	3.00	RIH to 2820
3:00	6:30	3.50	Wash 2820 to 3050, PU singles to 3325
6:30	8:30	2.00	RIH to 5736
8:30	10:30	2.00	W&R 5736 to 5828, 88' fill
10:30	11:30	1.00	Circ. Btms. Up, pump dry job
11:30	16:00	4.50	POOH, drag minimal.
16:00	18:00	2.00	LD clean out assembly & 6 5/8" WP
18:00	19:00	1.00	Clean floor lay out pipe spinners & Handling equipment not needed.
19:00	22:00	3.00	Rig up 350 ton csng. Tools, stabbing board & pick up machine.
22:00	0:00	2.00	Held safety meeting, Unit rig crew & Franks csng. Running 9 5/8" casing
0:00			
0:00			
0:00			
0:00			5:00:00 AM ON BOTTOM CIRC. Ready to cement
0:00			
0:00			
0:00			
0:00			
Daily Total	24.00		

(918) 599-9400

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
01/04/05	Wolverine Federal 17-3	Unit Rig #111	Sevier, UT	10-Dec	43-041-30036	Darren Naylor	
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
26	PU clean out ass.	5,828	0	0.00	#DIV/0!	Arapien	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
10.1	44	32.0	2/32	10.5	0.50	3.8	3	3	2/3	on bank	1/4/09:30	157,000	1680	5%	

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd) or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B	G											
RR4	12.250	HTC	J 1	427	Retip	18	18	18					#DIV/0!						
													#DIV/0!						
													#DIV/0!						
													#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD		60 spm	80 spm	100 spm
1	National	6	8.5	2.97	105	312							1			
2	National	6	8.5	2.97	105	312							2			
Both				5.94	210	624	123	127	2200							

SLOW PUMP

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD		60 spm	80 spm	100 spm
1	National	6	8.5	2.97	105	312							1			
2	National	6	8.5	2.97	105	312							2			
Both				5.94	210	624	123	127	2200							

DRILL STRING

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO	
12 1/4 bit		1.00	12.250		Arapien				Rig No	Unit 111
Bit sub		2.50	8.000						Cell No	918-645-6671
12 1/8 Watermelon mill		5.30	8.000						Last BOP Test	12/14
					<div style="display: flex; justify-content: space-between;"> <div>BOTTOMS UP TIME</div> <div>BG GAS</div> <div>GAS DATA CONN GAS</div> <div>TRIP GAS</div> </div>				Next BOP Test	
XO		2.00	7.750		45	1 to 25	0	0	Last Safety Meeting	1/4
6 - 6 5/8 spiral wt.		180.00	7.750		<div style="display: flex; justify-content: space-between;"> <div>GAS UNITS</div> <div>FROM</div> <div>SHOWS TO</div> <div>ROP (F1/HR)</div> </div>				Last BOP Drill	
26 - 5" spiral wt.		789.00	5.000						Last Operate Pipe Ran	
jar		32.00	6.500						Last Operate Blind Ran	
Total BHA:		1,011.80							Last Operate Annular	
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	LAST CASING	NEXT CASING
150	75	210	100	320	5,736	17	5,753		615	5800

GEOLOGIC

GENERAL INFO

SURVEYS

[illegible]

DAILY ACTIVITY

[illegible]

(918) 599-9400

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR		COUNTY, STATE	SPUD DATE	API#		SUPERVISOR
01/03/05	Wolverine Federal 17-3	Unit Rig #111		Sevier, UT	10-Dec	43-041-30036		Darren Naylor
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
25	Back reaming @ 3080		5,828	0	0.00	#DIV/0!	Arapien	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
10.1	50	29.8	2/32	10.0	0.50	3.8	6	5	4/5	3172	1/3/10:00	163,000	1700	##	267,300

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd) or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
																	T	B	G
5	12.250	SEC.	EBXS12S	437	10683359	22	22	22	3852	5579	1722	143.50	12.0	y	150	30/40	4	7	1
6	12.250	SEC.	EBXS12S	437	10683357	24	24	24	5579	5828	249	17.00	14.6	y	150	30/40			
													#DIV/0!						
													#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD		60 spm	80 spm	100 spm
1	National	6	8.5	2.97	105	312							1			
2	National	6	8.5	2.97	105	312							2			
Both				5.94	210	624	123	127	2200							

~~SLOW PUMP~~

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD		60 spm	80 spm	100 spm
1	National	6	8.5	2.97	105	312							1			
2	National	6	8.5	2.97	105	312							2			
Both				5.94	210	624	123	127	2200							

DRILL STRING

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO	
12 1/4 bit		1.00	12.250		Arapien				Rig No	Unit 111
Stabilized 1 deg. Motor		22.00	7.750						Cell No	918-645-6671
3 pt.		9.00	7.750						Last BOP Test	12/14
Directional ass.		78.00	7.750		<div style="display: flex; justify-content: space-between;"> <div>BOTTOMS UP TIME</div> <div>BG GAS</div> <div>GAS DATA CONN GAS</div> <div>TRIP GAS</div> </div>				Next BOP Test	
XO		2.00	7.750		45	1 to 25	0	0	Last Safety Meeting	1/3
6 - 6 5/8 spiral wt.		180.00	7.750		<div style="display: flex; justify-content: space-between;"> <div>GAS UNITS</div> <div>FROM</div> <div>SHOWS TO</div> <div>ROP (FT/HR)</div> </div>				Last BOP Drill	
26 - 5" spiral wt.		789.00	5.000						Last Operate Pipe Ram	
jar		32.00	6.500						Last Operate Blind Ram	
Total BHA:		1,113.00							Last Operate Annular	12/14
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	LAST CASING	NEXT CASING
150	75	210	100	320	5,736	17	5,753		615	5800

GEOLOGIC

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO	
12 1/4 bit		1.00	12.250		Arapien				Rig No	Unit 111
Stabilized 1 deg. Motor		22.00	7.750						Cell No	918-645-6671
3 pt.		9.00	7.750						Last BOP Test	12/14
Directional ass.		78.00	7.750		<div style="display: flex; justify-content: space-between;"> <div>BOTTOMS UP TIME</div> <div>BG GAS</div> <div>GAS DATA CONN GAS</div> <div>TRIP GAS</div> </div>				Next BOP Test	
XO		2.00	7.750		45	1 to 25	0	0	Last Safety Meeting	1/3
6 - 6 5/8 spiral wt.		180.00	7.750		<div style="display: flex; justify-content: space-between;"> <div>GAS UNITS</div> <div>FROM</div> <div>SHOWS TO</div> <div>ROP (FT/HR)</div> </div>				Last BOP Drill	
26 - 5" spiral wt.		789.00	5.000						Last Operate Pipe Ram	
jar		32.00	6.500						Last Operate Blind Ram	
Total BHA:		1,113.00							Last Operate Annular	12/14
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	LAST CASING	NEXT CASING
150	75	210	100	320	5,736	17	5,753		615	5800

GENERAL INFO

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO	
12 1/4 bit		1.00	12.250		Arapien				Rig No	Unit 111
Stabilized 1 deg. Motor		22.00	7.750						Cell No	918-645-6671
3 pt.		9.00	7.750						Last BOP Test	12/14
Directional ass.		78.00	7.750		<div> <div>BOTTOMS UP TIME</div> <div>BG GAS</div> <div>GAS DATA</div> <div>CONN GAS</div> <div>TRIP GAS</div> </div>				Next BOP Test	
XO		2.00	7.750		45	1 to 25	0	0	Last Safety Meeting	1/3
6 - 6 5/8 spiral wt.		180.00	7.750		<div> <div>GAS UNITS</div> <div>FROM</div> <div>SHOWS</div> <div>TO</div> <div>ROP (FT/HR)</div> </div>				Last BOP Drill	
26 - 5" spiral wt.		789.00	5.000						Last Operate Pipe Ram	
jar		32.00	6.500						Last Operate Blind Ram	
Total BHA:		1,113.00							Last Operate Annular	12/14
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	LAST CASING	NEXT CASING
150	75	210	100	320	5,736	17	5,753		615	5800

SURVEYS

[illegible]

DAILY ACTIVITY

[illegible]

24 hrs - midnight to midnight

DAILY ACTIVITY			
FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT
0:00	1:30	1.50	Pump sweep & dry job
1:30	6:00	4.50	POOH to csg shoe @ 615', normal drag
6:00	8:00	2.00	RIH to 3345
8:00	10:30	2.50	W&R 3345 to 3364
10:30	0:00	13.50	Backream 3320 up to 3175 (145')
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			6am. Back reaming @ 3163
Daily Total		24.00	

CONFIDENTIAL

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
01/01/05	Wolverine Federal 17-3	Unit Rig #111	Sevier, UT	10-Dec	43-041-30036	Darren Naylor	
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
23	CIRC. For wiper trip	5,828	249	17.00	14.6	Arapien	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
10.2	48	26.0	2/32	8.5	0.50	4.0	6	5	4/5	5630	1/1/10:00	160,000	2100	##	267,300

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM	WOB	DULL CONDITION		
																	T	B	G
5	12.250	SEC.	EBXS12S	437	10683359	22	22	22	3852	5579	1722	143.50	12.0	y	150	30/40	4	7	I
6	12.250	SEC.	EBXS12S	437	10683357	24	24	24	5579	5828	249	17.00	14.6	y	150	30/40			
													#DIV/0!						
													#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD	60 spm	80 spm	100 spm
1	National	6	8.5	2.97	105	312							1		
2	National	6	8.5	2.97	105	312							2		
Both				5.94	210	624	123	127	2200						

SLOW PUMP

DRILL STRING

GEOLOGIC

GENERAL INFO

BOTTOMHOLE ASSEMBLY	LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO
12 1/4 bit	1.00	12.250		Arapien				Rig No Unit 111
Stabilized 1 deg. Motor	22.00	7.750						Cell No 918-645-6671
3 pt.	9.00	7.750						Last BOP Test 12/14
Directional ass.	78.00	7.750						Next BOP Test
XO	2.00	7.750						Last Safety Meeting 12/14
6 - 6 5/8 spiral wt.	180.00	7.750						Last BOP Drill 12/14
26 - 5" spiral wt.	789.00	5.000						Last Operate Pipe Ra
jar	32.00	6.500						Last Operate Blind Ra
Total BHA:	1,113.00							Last Operate Annular 12/14
STRING WT.	BHA WT.	PU WT.	SO WT.	ROY TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG
150	75	210	100	320	5,736	17	5,753	615 5800

SURVEYS

MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL
5,576	23.90	224.60	5109	1983	-1400	-1377	0.68	MWD									
									5,773	22.70	227.40	5290	#####	-1454	-1431	1.20	MWD

DAILY ACTIVITY

FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT
0:00	1:00	1.00	W & R 1830 to 1960
1:00	2:30	1.50	RIH to 3040
2:30	3:30	1.00	W & R 4150 to 4273
3:30	4:30	1.00	RIH to 5496
4:30	6:00	1.50	W & R 5496 to 5579
6:00	22:00	16.00	Drill & survey 5579 to 5815
22:00	22:30	0.50	Rig service
22:30	23:30	1.00	Drill & survey 5815 to 5828
23:30	0:00	0.50	Circ. For wiper trip
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			6am RIH, Tripped out to shoe wiper trip looked good.
Daily Total	24.00		

CONFIDENTIAL

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR		COUNTY, STATE	SPUD DATE	API#		SUPERVISOR
12/31/04	Wolverine Federal 17-3	Unit Rig #111		Sevier, UT	10-Dec	43-041-30036		Darren Naylor
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
22	Trip in hole, Bit trip		5,579	101	9.00	11.2	Arapien	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
9.9	46	26.4	2/32	10.5	tr	4.0	6	6	5/7	5385	12/30/17:45	160,000	2000		267,300

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd) or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B	G											
5	12.250	SEC.	EBXS12S	437	10683359	22	22	22	3852	5579	1722	143.50	12.0	y	150	30/40	4	7	1
6	12.250	SEC.	EBXS12S	437		24	24	24	5579				#DIV/0!						
													#DIV/0!						
													#DIV/0!						

~~HYDRAULICS~~

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD			
														60 spm	80 spm	100 spm
1	National	6	8.5	2.97	105	312							1			
2	National	6	8.5	2.97	105	312							2			
Both				5.94	210	624	123	127	2200							

~~SLOW PUMP~~

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD			
														60 spm	80 spm	100 spm
1	National	6	8.5	2.97	105	312							1			
2	National	6	8.5	2.97	105	312							2			
Both				5.94	210	624	123	127	2200							

DRILL STRING

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO					
12 1/4 bit		1.00	12.250		Arapien				Rig No	Unit 111				
Stabilized 1 deg. Motor		22.00	7.750						Cell No	918-645-6671				
3 pt.		9.00	7.750						Last BOP Test	12/14				
Directional ass.		78.00	7.750		BOTTOMS UP TIME	BG GAS	GAS DATA CONN GAS	TRIP GAS	Next BOP Test					
XO		2.00	7.750	45					1 to 25	0	0	Last Safety Meeting	12/14	
6 - 6 5/8 spiral wt.		180.00	7.750	GAS UNITS					FROM	SHOWS TO	ROP (FT/HR)	Last BOP Drill	12/14	
26 - 5" spiral wt.		789.00	5.000									Last Operate Pipe Ram		
jar		32.00	6.500						Last Operate Blind Ram					
Total BHA:		1,113.00							Last Operate Annular 12/14					
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	LAST CASING	NEXT CASING				
150	75	210	100	320	5,736	17	5,753		615	5800				

GEOLOGIC

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO				
12 1/4 bit		1.00	12.250		Arapien				Rig No	Unit 111			
Stabilized 1 deg. Motor		22.00	7.750						Cell No	918-645-6671			
3 pt.		9.00	7.750						Last BOP Test	12/14			
Directional ass.		78.00	7.750		BOTTOMS UP TIME	BG GAS	GAS DATA CONN GAS	TRIP GAS	Next BOP Test				
XO		2.00	7.750	45					1 to 25	0	0	Last Safety Meeting	12/14
6 - 6 5/8 spiral wt.		180.00	7.750	GAS UNITS					FROM		SHOWS TO		
26 - 5" spiral wt.		789.00	5.000	GAS UNITS					FROM		ROP (FT/HR)		
jar		32.00	6.500						Last BOP Drill	12/14			
Total BHA:		1,113.00							Last Operate Pipe Ram				
Last Operate Blind Ram									Last Operate Annular	12/14			
STRING WT.		BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	LAST CASING			
150		75	210	100	320	5,736	17	5,753		615			
										5800			

GENERAL INFO

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO				
12 1/4 bit		1.00	12.250		Arapien				Rig No	Unit 111			
Stabilized 1 deg. Motor		22.00	7.750						Cell No	918-645-6671			
3 pt.		9.00	7.750						Last BOP Test	12/14			
Directional ass.		78.00	7.750		BOTTOMS UP TIME	BG GAS	GAS DATA CONN GAS	TRIP GAS	Next BOP Test				
XO		2.00	7.750	45					1 to 25	0	0	Last Safety Meeting	12/14
6 - 6 5/8 spiral wt.		180.00	7.750	GAS UNITS					FROM		SHOWS TO		
26 - 5" spiral wt.		789.00	5.000	GAS UNITS					FROM		ROP (FT/HR)		
jar		32.00	6.500						Last BOP Drill	12/14			
									Last Operate Pipe Ram				
Total BHA:		1,113.00							Last Operate Blind Ram				
									Last Operate Annular	12/14			
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	LAST CASING	NEXT CASING			
150	75	210	100	320	5,736	17	5,753		615	5800			

SURVEYS

[illegible]

DAILY ACTIVITY

FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT
0:00	9:00	9.00	Drill & surveys 5478 to 5579
9:00	9:30	0.50	Circ. Pump dry job
9:30	18:00	8.50	POOH for bit. Tight @ 3160, 2800 & 1810. Had to back ream 1810 up to 1680
18:00	19:30	1.50	Change bit, check motor, test MWD
19:30	21:00	1.50	RIH to shoe
21:00	22:30	1.50	Cut drilling line
22:30	0:00	1.50	RIH
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			6 am drilling 5585
0:00			
0:00			
0:00			
Daily Total	24.00		

CONFIDENTIAL

(918) 599-9400

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
12/30/04	Wolverine Federal 17-3	Unit Rig #111	Sevier, UT	10-Dec	43-041-30036	Darren Naylor	
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
21	DRILLING	5,478	300	23.50	12.8	Arapien	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
9.9	46	26.4	2/32	10.5	tr	4.0	6	6	5/7	5385	12/30/17:45	160,000	2000		267,300

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B	G											
5	12.250	SEC.	EBXS12S	437	10683359	22	22	22	3852		1626	121.00	13.4	y	150	30/40			
													#DIV/0!						
													#DIV/0!						
													#DIV/0!						

HYDRAULICS

HYDRAULIC DATA												FLOW CHART				
PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD		60 spm	80 spm	100 spm
1	National	6	8.5	2.97	105	312							1			
2	National	6	8.5	2.97	105	312							2			
Both				5.94	210	624	123	127	2200							

SLOW PUMP

HYDRAULIC DATA												FLOW CHART				
PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECO		60 spm	80 spm	100 spm
1	National	6	8.5	2.97	105	312							1			
2	National	6	8.5	2.97	105	312							2			
Both				5.94	210	624	123	127	2200							

DRILL STRING

WELL DATA					LOG DATA				GENERAL INFO	
BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO	
12 1/4 bit		1.00	12.250		Arapien				Rig No	Unit 111
Stabilized 1 deg. Motor		22.00	7.750						Cell Nr	918-645-6671
3 pt.		9.00	7.750						Last BOP Test	12/14
Directional ass.		78.00	7.750		<div> <div>BOTTOMS UP TIME</div> <div>45</div> </div> <div> <div> <div> <div> <div>BG GAS</div> <div>1 to 25</div> </div> <div> <div>GAS DATA</div> <div>CONV GAS</div> </div> </div> <div> <div>TRIP GAS</div> <div>0</div> </div> </div> </div>				Next BOP Test	
XO		2.00	7.750		<div> <div> <div> <div> <div>GAS UNITS</div> <div>FROM</div> </div> <div> <div>SHOWS</div> <div>TO</div> </div> </div> <div> <div>ROP (F/HR)</div> <div></div> </div> </div> </div>				Last Safety Meeting	12/14
6 - 6 5/8 spiral wt.		180.00	7.750						Last BOP Drill	12/14
26 - 5" spiral wt.		789.00	5.000						Last Operate Pipe Ram	
jar		32.00	6.500						Last Operate Blind Ram	
Total BHA:		1,113.00							Last Operate Annular	12/14
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	LAST CASING	NEXT CASING
150	75	210	100	320	5,736	17	5,753		615	5800

GEOLOGIC

WELL DATA					LOG DATA				GENERAL INFO	
BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO	
12 1/4 bit		1.00	12.250		Arapien				Rig No	Unit 111
Stabilized 1 deg. Motor		22.00	7.750						Cell Nr	918-645-6671
3 pt.		9.00	7.750						Last BOP Test	12/14
Directional ass.		78.00	7.750		<div style="display: flex; justify-content: space-between;"> <div>BOTTOMS UP TIME</div> <div>BG GAS</div> <div>GAS DATA CONN GAS</div> <div>TRIP GAS</div> </div>				Next BOP Test	
XO		2.00	7.750		45	1 to 25	0	0	Last Safety Meeting	12/14
6 - 6 5/8 spiral wt.		180.00	7.750		<div style="display: flex; justify-content: space-between;"> <div>GAS UNITS</div> <div>FROM</div> <div>SHOWS</div> <div>TO</div> <div>ROP (F/HR)</div> </div>				Last BOP Drill	12/14
26 - 5" spiral wt.		789.00	5.000						Last Operate Pipe Ram	
jar		32.00	6.500						Last Operate Blind Ram	
Total BHA:		1,113.00							Last Operate Annular	12/14
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	LAST CASING	NEXT CASING
150	75	210	100	320	5,736	17	5,753		615	5800

GENERAL INFO

WELL DATA					LOG DATA				GENERAL INFO	
BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO	
12 1/4 bit		1.00	12.250		Arapien				Rig No	Unit 111
Stabilized 1 deg. Motor		22.00	7.750						Cell Nr	918-645-6671
3 pt.		9.00	7.750						Last BOP Test	12/14
Directional ass.		78.00	7.750		<div> <div>BOTTOMS UP TIME</div> <div>45</div> </div> <div> <div> <div> <div> <div>BG GAS</div> <div>1 to 25</div> </div> <div> <div>GAS DATA</div> <div>CONV GAS</div> </div> </div> <div> <div>TRIP GAS</div> <div>0</div> </div> </div> </div>				Next BOP Test	
XO		2.00	7.750		<div> <div> <div> <div> <div>GAS UNITS</div> <div>FROM</div> </div> <div> <div>SHOWS</div> <div>TO</div> </div> </div> <div> <div>ROP (F/HR)</div> <div></div> </div> </div> </div>				Last Safety Meeting	12/14
6 - 6 5/8 spiral wt.		180.00	7.750						Last BOP Drill	12/14
26 - 5" spiral wt.		789.00	5.000						Last Operate Pipe Ram	
jar		32.00	6.500						Last Operate Blind Ram	
Total BHA:		1,113.00							Last Operate Annular	12/14
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	LAST CASING	NEXT CASING
150	75	210	100	320	5,736	17	5,753		615	5800

SURVEYS

MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL
5,208	27.20	225.10	4775	1806	-1289	-1266	0.40	MWD
5,453	24.20	226.50	4996	1912	-1365	-1341	1.88	MWD

DAILY ACTIVITY

[illegible]

CONFIDENTIAL

24 hrs - midnight to midnight

[illegible]

(918) 599-9400

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
12/28/04	Wolverine Federal 17-3	Unit Rig #111	Sevier, UT	10-Dec	43-041-30036	Darren Naylor	
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
19	DRILLING	4,969	409	23.50	17.4	Arapien	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
10.4	49	22.4	2/32	10.5	0.50	5.8	6	5	4/6	4730	12/28/09:30	153.000	2000		240.000

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd) or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B	G											
5	12.250	SEC.	EBXS12S	437	10683359	22	22	22	3852		1182	77.00	15.4	y	150	30/40	1	1	1
													#DIV/0!						
													#DIV/0!						
													#DIV/0!						

HYDRAULICS

HYDRAULICS													SLOW FLOW				
PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD			60 spm	80 spm	100 spm
1	National	6	8.5	2.97	105	312							1				
2	National	6	8.5	2.97	105	312							2				
Both				5.94	210	624	123	127	2200								

SLOW PUMP

HYDRAULICS													SLOW FLOW				
PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD			60 spm	80 spm	100 spm
1	National	6	8.5	2.97	105	312							1				
2	National	6	8.5	2.97	105	312							2				
Both				5.94	210	624	123	127	2200								

DRILL STRING

BHA DATA					GENERAL INFO					
BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO	
12 1/4 bit		1.00	12.250		Arapien				Rig No	Unit 111
Stabilized 1 deg. Motor		22.00	7.750						Cell No	918-645-6671
3 pt.		9.00	7.750						Last BOP Test	12/14
Directional ass.		78.00	7.750		BOTTOMS UP TIME	BG GAS	GAS DATA		Next BOP Test	
XO		2.00	7.750				CONV GAS	TRIP GAS		
6 - 6 5/8 spiral wt.		180.00	7.750		40 min.	1 to 25	0	0	Last Safety Meeting	12/14
26 - 5" spiral wt.		789.00	5.000		GAS UNITS	FROM	SHOWS		Last BOP Drill	12/14
jar		32.00	6.500				TO		ROP (FT/HR)	
Total BHA:		1,113.00							Last Operate Pipe Ram	
									Last Operate Blind Ra	
									Last Operate Annular	12/14
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	LAST CASING	NEXT CASING
140	75	185	110	320	5,736	17	5,753		615	5800

GEOLOGIC

BOTTOMHOLE ASSEMBLY					GENERAL INFO			
BOTTOMHOLE ASSEMBLY	LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO
12 1/4 bit	1.00	12.250		Arapien				Rig No Unit 111
Stabilized 1 deg. Motor	22.00	7.750						Cell N° 918-645-6671
3 pt.	9.00	7.750						Last BOP Test 12/14
Directional ass.	78.00	7.750		BOTTOMS UP TIME	BG GAS	GAS DATA CONN GAS	TRIP GAS	Next BOP Test
XO	2.00	7.750		40 min.	1 to 25	0	0	Last Safety Meeting 12/14
6 - 6 5/8 spiral wt.	180.00	7.750		GAS UNITS	FROM	SHOWS TO	ROP (FT/HR)	Last BOP Drill 12/14
26 - 5" spiral wt.	789.00	5.000						Last Operate Pipe Rammer
jar	32.00	6.500						Last Operate Blind Rammer
Total BHA:	1,113.00							Last Operate Annular 12/14
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG LAST CASING NEXT CASING
140	75	185	110	320	5,736	17	5,753	615 5800

GENERAL INFO

BOTTOMHOLE ASSEMBLY					GENERAL INFO			
BOTTOMHOLE ASSEMBLY	LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO
12 1/4 bit	1.00	12.250		Arapien				Rig No Unit 111
Stabilized 1 deg. Motor	22.00	7.750						Cell No 918-645-6671
3 pt.	9.00	7.750						Last BOP Test 12/14
Directional ass.	78.00	7.750		BOTTOMS UP TIME	BG GAS	GAS DATA CONN GAS	TRIP GAS	Next BOP Test
XO	2.00	7.750		40 min.	1 to 25	0	0	Last Safety Meeting 12/14
6 - 6 5/8 spiral wt.	180.00	7.750		GAS UNITS	FROM	SHOWS TO	ROP (FT/HR)	Last BOP Drill 12/14
26 - 5" spiral wt.	789.00	5.000						Last Operate Pipe Rar
jar	32.00	6.500						Last Operate Blind Ra
Total BHA:	1,113.00							Last Operate Annular 12/14
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG
LAST CASING	NEXT CASING							
140	75	185	110	320	5,736	17	5,753	615 5800

SURVEYS

MD	INCL	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL
4,597	27.50	218.30	4239	1517	-1061	-1084	2.60	MWD
4,963	29.70	218.80	4560	1891	-1203	-1188	1.40	MWD

DAILY ACTIVITY

[illegible]

CONFIDENTIAL

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
12/27/04	Wolverine Federal 17-3	Unit Rig #111	Sevier, UT	10-Dec	43-041-30036	Darren Naylor	
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
18	DRILLING	4,590	320	23.50	13.6	Arapien	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
10.3	47	19.2	2/32	9.5	0.50	5.0	6	8	5/8	4404	12/27/09:30	151,000	2100		240,000

BIT DATA

BIT NO.	SIZE	MFG	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B	G											
5	12.250	SEC.	EBXS12S	437	10683359	22	22	22	3852		738	53.50	13.8	N	50	25/30	1	1	1
													#DIV/0!						
													#DIV/0!						
													#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD			60 spm	80 spm	100 spm
1	National	6	8.5	2.97	105	312							1				
2	National	6	8.5	2.97	105	312							2				
Both				5.94	210	624	123	127	2200								

~~SLOW PUMP~~

		60 spm	80 spm	100 spm
1				
2				

DRILL STRING

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.
12 1/4 bit		1.00	12.250	
Stabilized 1 deg. Motor		22.00	7.750	
3 pt.		9.00	7.750	
Directional ass.		78.00	7.750	
XO		2.00	7.750	
6 - 6 5/8 spiral wt.		180.00	7.750	
26 - 5" spiral wt.		789.00	5.000	
jar		32.00	6.500	
Total BHA:		1,113.00		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE
140	75	185	110	320

GEOLOGIC

	FORMATION	MD	TVD	LITHOLOGY
	Arapien			
			GAS DATA	
BOTTOMS UP TIME	B/G GAS	CONN GAS	TRIP GAS	
40 min.	1 to 25	0	0	
		SHOWS		
GAS UNITS	FROM	TO	ROP (FT/HR)	
E GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	
5,736	17	5,753		

GENERAL INFO

RIG INFO	
Rig No	Unit 111
Cell No	918-645-6671
Last BOP Test	12/14
Next BOP Test	
Last Safety Meeting	12/14
Last BOP Drill	12/14
Last Operate Pipe Rar	
Last Operate Blind Ra	
Last Operate Annular	12/14
LAST CASING	NEXT CASING
615	5800

SURVEYS

[illegible]

DAILY ACTIVITY

[illegible]

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#		SUPERVISOR	
12/26/04	Wolverine Federal 17-3	Unit Rig #111	Sevier, UT	10-Dec	43-041-30036		Darren Naylor	
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
17	DRILLING		4,270	94	9.00	10.4	Arapien	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
10.3	40	19.6	2/32	7.5	0.50	5.0	7	7	5/7	4270	12/26/08:45	153,000	2100		245,000

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B	G											
5	12.250	SEC.	EBXS12S	437	10683359	18	18	18	3852		324	30.00	10.8	N	50	25/30	1	1	1
													#DIV/0!						
													#DIV/0!						
													#DIV/0!						

HYDRAULICS

PUMP NO	MANUFACTURER	LINER	STROKE LENGTH	GAL / STR	SPM	GPM	AV DP	AV OC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD		60 spm	80 spm	100 spm
1	National	6	8.5	2.97	105	312							1			
2	National	6	8.5	2.97	105	312							2			
Both				5.94	210	624	123	127	2200							

~~SLOW PUMP~~

	60 spm	80 spm	100 spm
1			
2			

DRILL STRING

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.
12 1/4 bit		1.00	12.250	
Stabilized 1 deg. Motor		22.00	7.750	
3 pt.		9.00	7.750	
Directional ass.		78.00	7.750	
XO		2.00	7.750	
6 - 6 5/8 spiral wt.		180.00	7.750	
26 - 5" spiral wt.		789.00	5.000	
jar		32.00	6.500	
Total BHA:		1,113.00		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE
135	75	175	100	300

GEOLOGIC

FORMATION	MD	TVD	LITHOLOGY
Arapien			
GAS DATA			
BOTTOMS UP TIME	BG GAS	CONN GAS	TRIP GAS
40 min.	1 to 25	0	0
SHOWS			
GAS UNITS	FROM	TO	ROP (FT/HR)
GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG
5.736	17	5.753	

GENERAL INFO

RIG INFO	
Rig No	Unit 111
Cell No	918-645-6671
Last BOP Test	12/14
Next BOP Test	
Last Safety Meeting	12/14
Last BOP Drill	12/14
Last Operate Pipe Ram	
Last Operate Blind Ram	
Last Operate Annular	12/14
LAST CASING	NEXT CASING
615	5800

SURVEYS

MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL
4,045	27.30	225.10	3742	#####	-886.00	-918.00	2.20	MWD
4,228	25.60	224.60	3906	#####	-943.00	-974.00	0.50	MWD

DAILY ACTIVITY

FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT
0:00	9:00	9.00	Drill 4176 to 4270
9:00	13:00	4.00	POOH for steerable ass.
13:00	16:00	3.00	LD near bit 3 pt. PU moto
16:00	19:30	3.50	Work on MWD, had prob
19:30	22:30	3.00	RIH to 4180
22:30	0:00	1.50	W & R 4180 to 4270

CONFIDENTIAL

[illegible]

Daily Total	24.00
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Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR		COUNTY, STATE	SPUD DATE	API#		SUPERVISOR
12/25/04	Wolverine Federal 17-3	Unit Rig #111		Sevier, UT	10-Dec	43-041-30036		Darren Naylor
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
16	DRILLING		4,176	200	14.00	14.3	Arapien	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
10.2	39	36.0	3/32	10.5	0.75	5.0	7	6	5/7	4135	12/25/11:00	144,000	2100		237,600

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA	IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION
5	12.250	SEC.	EBXS12S	437	10683359	18 18 18	3852		324	30.00	10.8	N	50	25/30	1 1 1
											#DIV/0!				
											#DIV/0!				
											#DIV/0!				

HYDRAULICS

SLOW PUMP

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD	60 spm	80 spm	100 spm
1	National	6	8.5	2.97	105	312							1		
2	National	6	8.5	2.97	105	312							2		
Both				5.94	210	624	123	127	2200						

DRILL STRING

GEOLOGIC

GENERAL INFO

BOTTOMHOLE ASSEMBLY	LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO
12 1/4 bit	1.00	12.250		Arapien				Rig No Unit 111
NB 3 pt.	9.00	7.750						Cell No 918-645-6671
monel / 3 pt.	40.00	7.750						Last BOP Test 12/14
Shock sub	12.00	7.750						Next BOP Test
XO	2.00	7.750						Last Safety Meeting 12/14
6 - 6 5/8 spiral wt.	180.00	7.750						Last BOP Drill 12/14
26 - 5" spiral wt.	789.00	5.000						Last Operate Pipe Ra
jar	32.00	6.500						Last Operate Blind Ra
Total BHA:	1,065.00							Last Operate Annular 12/14
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG
135	75	175	100	300	5,736	17	5,753	
								615 5800

SURVEYS

MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL
								MWD									MWD
								MWD									MWD

DAILY ACTIVITY

FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT
0:00	1:00	1.00	Drill 3976 to 3994
1:00	1:30	0.50	W & R 3994 to 3954 drag @ 80k over, torque 420
1:30	8:30	7.00	Drill 3994 to 4118
8:30	9:00	0.50	W & R 4118 to 3980 60k. Drag
9:00	13:00	4.00	Drill 4118 to 4148
13:00	13:30	0.50	Rig service
13:30	14:00	0.50	LD 12 jts. Dp up to 3768
14:00	14:30	0.50	Pull MWD w/ wireline
14:30	20:00	5.50	W & R 3768 to 4056
20:00	20:30	0.50	Instal MWD, still not working
20:30	22:00	1.50	W & R 4056 to 4148
22:00	0:00	2.00	Drill 4148 to 4176
0:00			Reaming 3768 to 4148 relieved torque & drag back to normal.
0:00			
0:00			5am Drilling @ 4238
0:00			
0:00			
Daily Total	24.00		

CONFIDENTIAL

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
12/24/04	Wolverine Federal 17-3	Unit Rig #111	Sevier, UT	10-Dec	43-041-30036	Darren Naylor	
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
15	DRILLING	3,976	100	14.50	6.9	Arapien	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
10.1	35	36.0	3/32	9.5	0.50	4.8	8	7	5/6	3893	12/24/08:45	127,000	2100		209,550

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA	IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM	WOB	DULL CONDITION
5	12.250	SEC.	EBXS12S	437	10683359	18 18 18	3852		124	16.00	7.8	N	50	25/30	1 1 1
											#DIV/0!				
											#DIV/0!				
											#DIV/0!				

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD	60 spm	80 spm	100 spm
1	National	6	8.5	2.97	110	327							1		
2	National	6	8.5	2.97	110	327							2		
Both				5.94	220	653	123	127							

SLOW PUMP

DRILL STRING

GEOLOGIC

GENERAL INFO

BOTTOMHOLE ASSEMBLY	LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO
12 1/4 bit	1.00	12.250		Arapien				Rig No Unit 111
7 3/4 1.75 deg. Motor	22.00	7.750						Cell No 918-645-6671
Directional ass.	67.00	7.750						Last BOP Test 12/14
Shock sub	12.00	7.750						Next BOP Test
XO	2.00	7.750						Last Safety Meeting 12/14
6 - 6 5/8 spiral wt.	180.00	7.750						Last BOP Drill 12/14
26 - 5" spiral wt.	789.00	5.000						Last Operate Pipe Ra
jar	32.00	6.500						Last Operate Blind Ra
Total BHA:	1,105.00							Last Operate Annular 12/14
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG
128	75	150	115	550	5,736	17	5,753	615 5800

SURVEYS

MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL
								MWD									MWD
								MWD									MWD

DAILY ACTIVITY

FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT
0:00	4:00	4.00	RIH
4:00	6:00	2.00	W & R 3780 to 3876
6:00	10:30	4.50	Drill 3876 to 3903
10:30	11:00	0.50	Conn. pulled 80k over sting wt. W & R 3903 to 3833
11:00	14:30	3.50	Drill 3903 to 3934
14:30	16:30	2.00	W & R 3934 to 3870 Tight, pulling 70 to 80k. Over
16:30	17:00	0.50	Rig service
17:00	21:00	4.00	Drill 3934 to 3964
21:00	21:30	0.50	W & R 3964 to 3900 Drag still @ 70 to 80k. Over string wt.
21:30	0:00	2.50	Drill 3964 to 3976
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
Daily Total	24.00		

CONFIDENTIAL

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
12/23/04	Wolverine Federal 17-3	Unit Rig #111	Sevier, UT	10-Dec	43-041-30036	Darren Naylor	
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
14	Trip in hole	3,876	24	1.50	16.0	Arapien	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
10.1	35	42.0	3/32	8.0	0.50	5.3	5	7	4/6	3857	12/23/12:20	120,000	2000		183,150

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B	G											
5	12.250	SEC.	EBXS12S	437	10683359	18	18	18	3852	3876	24	1.50	16.0	y	150	25/30	1	1	1
													#DIV/0!						
													#DIV/0!						
													#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD	60 spm	80 spm	100 spm
1	National	6	8.5	2.97	110	327							1		
2	National	6	8.5	2.97	110	327							2		
Both				5.94	220	653	123	127							

SLOW PUMP

DRILL STRING					GEOLOGIC				GENERAL INFO	
BOTTOMHOLE ASSEMBLY	LENGTH	O.D.	I.D.		FORMATION	MD	TVD	LITHOLOGY	RIG INFO	
12 1/4 bit	1.00	12.250			Arapien				Rig No	Unit 111
7 3/4 1.75 deg. Motor	22.00	7.750							Cell No	918-645-6671
Directional ass.	67.00	7.750							Last BOP Test	12/14
Shock sub	12.00	7.750							Next BOP Test	
XO	2.00	7.750							Last Safety Meeting	12/14
6 - 6 5/8 spiral wt.	180.00	7.750							Last BOP Drill	12/14
26 - 5" spiral wt.	789.00	5.000							Last Operate Pipe Ran	
jar	32.00	6.500							Last Operate Blind Ra	
Total BHA:	1,105.00								Last Operate Annular	12/14
STRING WT.	BHA WT.	PU WT.	SO WT.	ROY. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	LAST CASING	NEXT CASING
128	75	150	115	550	5,738	17	5,753		615	5800

SURVEYS

MD	INCL	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL	MD	INCL	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL
								MWD									MWD
								MWD									MWD

DAILY ACTIVITY

FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT
0:00	4:30	4.50	Lay down fish & tools
4:30	8:00	3.50	PU bit motor MWD, test MWD
8:00	10:30	2.50	RIH to 3097, tight
10:30	11:00	0.50	Kelly up wash & ream 3097 to 3172
11:00	11:30	0.50	RIH to 3801
11:30	13:00	1.50	Wash & ream 3801 to 3852
13:00	14:30	1.50	Drill 3852 to 3876
14:30	15:00	0.50	Wash & ream 3801 to 3860, Hole torque sevier, Motor pressured up.
15:00	20:00	5.00	POOH wet using spinners, Motor came thru table parted, Internal capture device brought all of motor out of hole
20:00	22:00	2.00	Pull mousehole lay down motor.
22:00	0:00	2.00	Pick up Conventional BHA. Bit, nearbit 3 pt. monel, 3 pt. reamer, monel, rest of BHA
0:00			
0:00			Will go in hole with this assembly and try to alleviate hole torque, and check dog legs to see if that is an issue
0:00			Do not think Weatherford motors are @ fault, but they are shipping Black Max motors @ Weatherford Directional exper
0:00			
0:00			
0:00			This am reaming @ 3870
0:00			
Daily Total	24.00		

CONFIDENTIAL

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE 12/22/04	WELL Wolverine Federal 17-3	CONTRACTOR Unit Rig #111	COUNTY, STATE Sevier, UT	SPUD DATE 10-Dec	API# 43-041-30036	SUPERVISOR Darren Naylor
DAYS / SPUD 13	PRESENT OPERATIONS @ MIDNIGHT LD fish & fishing tools	TOTAL DEPTH 3,852	PROGRESS 0	DRILLING TIME 0.00	ROP #DIV/0!	FORMATION Arapien
						AUTH. DEPTH 6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
10.1	35	42.0	3/32	8.0	0.50	5.3	4	8	4/6	3815	12/22/16:00	120,000	2000		183,150

BIT DATA

B/T NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA	IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION T B G
											#DIV/0!	y	150	10/25	4
											#DIV/0!				
											#DIV/0!				
											#DIV/0!				

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD	60 spm	80 spm	100 spm
1	National	6	8.5	2.97	110	327							1		
2	National	6	8.5	2.97	110	327							2		
Both				5.94	220	653	123	127							

SLOW PUMP

DRILL STRING				GEOLOGIC				GENERAL INFO			
BOTTOMHOLE ASSEMBLY	LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO			
11 3/4 Overshot	4.00			Arapien				Rig No	Unit 111		
1 jt. 10 3/4 washpipe	28.00							Cell No	918-645-6671		
XO	2.00							Last BOP Test	12/14		
								Next BOP Test			
XO	2.00							Last Safety Meeting	12/14		
6 - 6 5/8 spiral wt.	180.00							Last BOP Drill	12/14		
26 - 5" spiral wt.	780.00							Last Operate Pipe Ra			
jar	32.00							Last Operate Blind Ra			
Total BHA:	1,028.00							Last Operate Annular	12/14		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG			
128	75	150	115	550	5,736	17	5,753		615	5800	

SURVEYS

MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL
								MWD									MWD
								MWD									MWD

DAILY ACTIVITY

FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT
0:00	3:30	3.50	RIH w/overshot & 9 3/4" grapple
3:30	9:00	5.50	Wash over fish, left btm. With fish, lost some where up hole.
9:00	13:00	4.00	POOH no fish, grapple was dulled out. Could of done this while washing over stator.
13:00	13:30	0.50	Change grapple to 9 5/8
13:30	14:00	0.50	Rig service
14:00	17:00	3.00	RIH w/overshot & 9 5/8" grapple
17:00	18:00	1.00	Tag fish @ 3795 work down to 3820 (btm.)
18:00	0:00	6.00	POOH with fish, had 1" caught, Had to wash & beat thru tight spots @ 2800 to 2710 & 2420 to 2390
0:00			OD of fish was 9 3/4"
0:00			
0:00			
0:00			
0:00			This am RIH w/ directional assembly
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
Daily Total	24.00		

CONFIDENTIAL

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
12/21/04	Wolverine Federal 17-3	Unit Rig #111	Sevier, UT	10-Dec	43-041-30036	Darren Naylor	
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
12	POOH w/ 8" overshot	3,852	0	0.00	#DIV/0!	Arapien	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
10.1	36	46.0	3/32	9.0	0.55	5.5	7	7	5/7	3852	12/21/18:00	118,000	2200		183,150

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						6 x 16		1.18									3655		
3	12.250	DPI	MP 45	447	2015727	6 x 16		1.18	3655		197	11.00	17.9	y	150	10/25	4		
4	12.250	HTC	J-1	327	RETIP	16	16	16				0.00	#VALUE!						
													#DIV/0!						
													#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD	SLOW PUMP		
													60 spm	80 spm	100 spm
1	National	6	8.5	2.97	110	327							1		
2	National	6	8.5	2.97	110	327							2		
Both				5.94	220	653	123	127							

DRILL STRING

GEOLOGIC

GENERAL INFO

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO	
Bit		1.00			Arapien				Rig No	Unit 111
Nearbit 3 pt.		8.00							Cell No	918-645-6671
8" DC		29.00							Last BOP Test	12/14
3 pt.		8.00			BOTTOMS UP TIME	BG GAS	GAS DATA		Next BOP Test	
XO		2.00					CONN GAS	TRIP GAS		
					30 min.	1 to 25	0	0	Last Safety Meeting	12/14
6 - 6 5/8 spiral wt.		180.00			GAS UNITS	FROM	SHOWS		Last BOP Drill	12/14
							TO	ROP (FT/HR)		
26 - 5" spiral wt.		780.00							Last Operate Pipe Ram	
jar		32.00							Last Operate Blind Ra	
Total BHA:		1,040.00							Last Operate Annular	12/14
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	LAST CASING	NEXT CASING
128	75	150	115	550	5,736	17	5,753		615	5800

SURVEYS

MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL
								MWD									MWD
								MWD									MWD

DAILY ACTIVITY

FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT
0:00	1:30	1.50	Check & LD 8" over shot, 5 1/8" grapple dulled, was over fish.
1:30	6:00	4.50	PU 12 1/4 bit, 12 1/4 nearbit reamer, 8" DC, 12 1/4 3pt. Reamer
6:00	8:30	2.50	RIH to 2283', tight
8:30	9:00	0.50	W & R 2283 to 2326
9:00	10:30	1.50	RIH to 3750', LD singles up to 3443'
10:30	11:00	0.50	Rig service
11:00	19:00	8.00	Wash & Ream 3443 to 3820, top of fish.
19:00	19:30	0.50	Circ. 100+ vis. Sweep, pump dry job.
19:30	23:00	3.50	POOH, using spinners
23:00	23:30	0.50	LD bit 3pt. Reamers & 8" dc
23:30	0:00	0.50	PU 11 3/4" overshot & 1 jt. 10 3/4" washpipe
0:00			
0:00			
0:00			
0:00			
0:00			This am. Washing over fish.
0:00			
Daily Total	24.00		

CONFIDENTIAL

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
12/20/04	Wolverine Federal 17-3	Unit Rig #111	Sevier, UT	10-Dec	43-041-30036	Darren Naylor	
DAYS / SPUD	PRESENT OPERATIONS @ MIDNIGHT	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
11	POOH w/ 8" overshot	3,852	0	0.00	#DIV/0!	Arapien	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
9.9	33	45.0	2/32	10.2	0.50	5.0	5	5	4/5	3852	12/20/04:00	211,000	2100		183,150

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd" or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM	WOB	DULL CONDITION		
																	T	B	G
3	12.250	DPI	MP 45	447	2015727	6 x 16		1.18	3655		197	11.00	17.9	y	150	10/25	4		
												0.00	#VALUE!						
													#DIV/0!						
													#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD	60 spm	80 spm	100 spm
1	National	6	8.5	2.97	110	327							1		
2	National	6	8.5	2.97	110	327							2		
Both				5.94	220	653	123	127							

SLOW PUMP

DRILL STRING				GEOLOGIC				GENERAL INFO			
BOTTOMHOLE ASSEMBLY	LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO			
				Arapien				Rig No	Unit 111		
								Cell No	918-645-6671		
								Last BOP Test	12/14		
								Next BOP Test			
								Last Safety Meeting	12/14		
								Last BOP Drill	12/14		
6 - 6 5/8 spiral wt.	180.00							Last Operate Pipe Ran			
26 - 5" spiral wt.	780.00							Last Operate Blind Ra			
jar	32.00							Last Operate Annular	12/14		
Total BHA:	992.00							LAST CASING	NEXT CASING		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG			
128	75	150	115	550	5,736	17	5,753		615	5800	

SURVEYS

MD	INCL	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL	MD	INCL	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL
								MWD									MWD
								MWD									MWD

DAILY ACTIVITY

FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT
0:00	2:30	2.50	Wait on Fishing tools
2:30	3:30	1.00	Make up 11 3/4 overshot, 1 jt. 10 3/4 wash pipe
3:30	7:00	3.50	RIH w/ fishing tools
7:00	8:00	1.00	Kelly up wash thru ledge @ 1435'
8:00	9:30	1.50	RIH w/ fishing tools
9:30	13:00	3.50	Circ. Try to work thru tight spot @ 3524'. No go
13:00	16:30	3.50	POOH LD fishing assembly
16:30	17:00	0.50	Make up 8" overshot w/ 5 1/8 grapple
17:00	19:30	2.50	RIH w/ fishing tools
19:30	21:00	1.50	Wash over fish, was able to get on fish, but could not get hook set.
21:00	0:00	3.00	POOH LD fishing assembly
0:00			
0:00			
0:00			This am. RIH w/ 12 1/4 bit, 12 1/4 nearbit reamer, 8" DC, 12 1/4 3pt. Reamer & rest of BHA
0:00			Will clean up tight spots & ledges so we can get on fish w/ 11 3/4 overshot & 1 jt. 10 3/4 washpipe.
0:00			Inspection of 8" overshot showed we were over fish, 5 1/8" grapple was dulled out.
0:00			
Daily Total	24.00		

CONFIDENTIAL

(918) 599-9400

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#		SUPERVISOR
12/19/04	Wolverine Federal 17-3	Unit Rig #111	Sevier, UT	10-Dec	43-041-30036		Darren Naylor
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
10	Wait on fishing tools	3,852	124	9.00	13.8	Arapien	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
9.8+	33	46.0	2/32	10.5	0.50	4.8	3	4	3/4	3852	12/19/16:00	181,500	2100		181,500

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA		IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
																T	B	G
2	12.250	DPI	MP54-B2	437	2016038	6 x 16	1.18	615	3655	3040	89.00	34.2	Y	150	10/25	4		
3	12.250	DPI	MP 45	447	2015727	6 x 16	1.18	3655		197	11.00	17.9	y	150	10/25			
												#DIV/0!						
												#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD			60 spm	80 spm	100 spm
1	National	6	8.5	2.97	110	327							1				
2	National	6	8.5	2.97	110	327							2				
Both				5.94	220	653	128	133	1900	300							

SLOW PUMP

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD			60 spm	80 spm	100 spm
1	National	6	8.5	2.97	110	327							1				
2	National	6	8.5	2.97	110	327							2				
Both				5.94	220	653	128	133	1900	300							

DRILL STRING

DRILL STRING					LOG DATA				Casing Data	
BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO	
Bit		1.50			Arapien				Rig No	Unit 111
Motor		29.00							Cell No	918-645-6671
9 3/4 stabilizer		5.50							Last BOP Test	12/14
2 - 8" monels		62.00			<div> <div> BOTTOMS UP TIME </div> <div> BG GAS </div> <div> GAS DATA CONV GAS </div> <div> TRIP GAS </div> </div>				Next BOP Test	
8" shock sub		12.00			30 min.	1 to 25	0	0	Last Safety Meeting	12/14
6 - 6 5/8 spiral wt.		180.00			<div> <div> GAS UNITS </div> <div> FROM </div> <div> SHOWS </div> <div> TO </div> <div> ROP (FT/HR) </div> </div>				Last BOP Drill	12/14
26 - 5" spiral wt.		780.00							Last Operate Pipe Ra	
jar		32.00							Last Operate Blind Ra	
Total BHA:		1,102.00							Last Operate Annular	12/14
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	LAST CASING	NEXT CASING
128	75	150	115	550	5,736	17	5,753		615	5800

GEOLOGIC

DRILL STRING					LOG DATA				RIG INFO	
BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY		
Bit		1.50			Arapien				Rig No	Unit 111
Motor		29.00							Cell No	918-645-6671
9 3/4 stabilizer		5.50							Last BOP Test	12/14
2 - 8" monels		62.00			<div> <div>BOTTOMS UP TIME</div> <div>30 min.</div> </div> <div> <div>BG GAS</div> <div>1 to 25</div> </div> <div> <div>GAS DATA</div> <div>CONV GAS</div> <div>0</div> </div> <div> <div>TRIP GAS</div> <div>0</div> </div>				Next BOP Test	
8" shock sub		12.00			<div> <div>SHOWS</div> <div>0</div> </div>				Last Safety Meeting	12/14
6 - 6 5/8 spiral wt.		180.00			<div> <div>GAS UNITS</div> <div>FROM</div> <div>TO</div> </div> <div> <div>ROP (FT/HR)</div> </div>				Last BOP Drill	12/14
26 - 5" spiral wt.		780.00							Last Operate Pipe Ra	
jar		32.00							Last Operate Blind Ra	
Total BHA:		1,102.00							Last Operate Annular	12/14
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	LAST CASING	NEXT CASING
128	75	150	115	550	5,736	17	5,753		615	5800

GENERAL INFO

DRILL STRING					LOG DATA				Casing Data	
BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO	
Bit		1.50			Arapien				Rig No	Unit 111
Motor		29.00							Cell No	918-645-6671
9 3/4 stabilizer		5.50							Last BOP Test	12/14
2 - 8" monels		62.00			BOTTOMS UP TIME	BG GAS	GAS DATA CONV GAS	TRIP GAS	Next BOP Test	
8" shock sub		12.00			30 min.	1 to 25	0	0	Last Safety Meeting	12/14
6 - 6 5/8 spiral wt.		180.00			GAS UNITS	FROM	SHOWS TO	ROP (FT/HR)	Last BOP Drill	12/14
26 - 5" spiral wt.		780.00							Last Operate Pipe Ra	
jar		32.00							Last Operate Blind Ra	
Total BHA:		1,102.00							Last Operate Annular	12/14
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	LAST CASING	NEXT CASING
128	75	150	115	550	5,736	17	5,753		615	5800

SURVEYS

MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL
3,524	32.00	223.70	3289	####	####	####	2.80	MWD
3,708	30.20	225.10	3448	####	####	####	0.80	MWD

DAILY ACTIVITY

24 HOURS - MIDNIGHT TO MIDNIGHT			
FROM	TO	HRS	
0:00	9:00	9.00	Drill & Surveys 3728 to 3852
9:00	9:30	0.50	Wash & ream tight hole
9:30	11:00	1.50	Lost btm. Half of mtr. Try to recover.
11:00	14:30	3.50	Chain out of hole
14:30	0:00	7.00	Wait on Fishing tools
0:00			
0:00			
0:00			
0:00			This am TIH with fishing tools
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
Daily Total		21.50	

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
12/18/04	Wolverine Federal 17-3	Unit Rig #111	Sevier, UT	10-Dec	43-041-30036	Darren Naylor	
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
9	Drilling	3,728	200	9.00	22.2	surface	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
9.8+	34	44.0	3/32	10.5	0.50	5.0	6	9	4/7	3655	12/18/18:00	103,000	2000		169,950

BIT DATA

BIT NO.	SIZE	MFG	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
																	T	B	G
2	12.250	DPI	MP54-B2	437	2016038	6 x 16		1.18	615	3655	3040	89.00	34.2	Y	150	10/25	4		
3	12.250	DPI	MP 45	447	2015727	6 x 16		1.18	3655		73	2.00	36.5	y	150	10/25			
													#DIV/0!						
													#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD		60 spm	80 spm	100 spm
1	National	6	8.5	2.97	110	327							1			
2	National	6	8.5	2.97	110	327							2			
Both				5.94	220	653	128	133	1900	300						

DRILL STRING

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO							
Bit		1.50			Arapien				Rig No	Unit 111						
Motor		29.00							Cell No	918-645-6671						
9 3/4 stabilizer		5.50							Last BOP Test	12/14						
2 - 8" monels		62.00			BOTTOMS UP TIME	BG GAS	GAS DATA CONN GAS	TRIP GAS	Next BOP Test							
8" shock sub		12.00							30 min.	1 to 25	0	0	Last Safety Meeting	12/14		
6 - 6 5/8 spiral wt.		180.00							GAS UNITS		FROM	SHOWS	TO	ROP (FT/HR)	Last BOP Drill	12/14
26 - 5" spiral wt.		780.00													Last Operate Pipe Rar	
jar		32.00									Last Operate Blind Ra					
Total BHA:		1,102.00									Last Operate Annular	12/14				
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	LAST CASING		NEXT CASING					
128	75	150	115	550	5,736	17	5,753		615	5800						

GEOLOGIC

GENERAL INFO

SURVEYS

MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL
3,524	32.00	223.70	3289	####	####	####	2.80	MWD									MWD
3,708	30.20	225.10	3448	####	####	####	0.80	MWD									MWD

DAILY ACTIVITY

FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT
0:00	7:00	7.00	Drill & Surveys 3528 to 3654
7:00	8:00	1.00	Circ. Sweep & pump dry job
8:00	12:00	4.00	POOH for p rate
12:00	14:30	2.50	Change bit motor & Mwd
14:30	16:30	2.00	RIH to 2500'
16:30	17:00	0.50	Wash & ream bridge 2500 to 2590
17:00	18:00	1.00	RIH wash 60' to btm.
18:00	18:30	0.50	Drill 3656 to 3680
18:30	21:30	3.00	Wash & ream tight hole 3680 up to 3600
21:30	22:30	1.00	Work on pump, Blew a new swab.
22:30	0:00	1.50	Drill & Surveys 3680 to 3728
0:00			
0:00			
0:00			
0:00			6:00 am drlg. @ 3820
0:00			
0:00			
Daily Total	24.00		

CONFIDENTIAL

016

EXACT Engineering, Inc.

www.exactengineering.com

415 S. Boston Ave., Suite 734, Tulsa, OK 74103 • (918) 599-9400 • (918) 599-9401 (fax)

Steven R. Hash, P.E.
Registered Professional Engineer
stevehash@exactengineering.com

CONFIDENTIAL PLEASE!

February 20, 2005

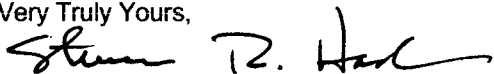
Mr. Dustin Doucet
Utah Division of Oil, Gas & Mining
1594 West North Temple, Suite 1210
Salt Lake City, UT 84114-5801

Re: Wolverine Federal 17-3 well
Sec 17 T23S R01W
Sevier Co., UT
API# 43-041-30036

Dear Mr. Doucet,

On behalf of Wolverine Gas and Oil Company of Utah, LLC, please find enclosed daily drilling reports for the subject well from January 19, 2005 through our final drilling report on January 24, 2005. Our present status is waiting on completion while we continue to drill additional wells from the same drill pad. We respectfully request that the enclosed information remain confidential.

Very Truly Yours,



Steven R. Hash
Consulting Engineer for Wolverine Gas and Oil Company of Utah, LLC

RECEIVED

FEB 11 2005

copy without enclosures via email to:

Wolverine Gas & Oil Co of Utah, LLC: Richard Moritz, Sue Benson
EXACT Engineering, Inc. well file

DIV. OF OIL, GAS & MINING

Petroleum Engineering Consulting, Personnel & Jobsite Supervision
complete well design, construction & management, drilling, completion, production, pipelines, appraisals,
due diligence, acquisitions, procedures, temporary personnel and field supervision

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
01/19/05	Wolverine Federal 17-3	Unit Rig #111	Sevier, UT	10-Dec	43-041-30036	Darren Naylor	
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
41	work stuck logging tool	7,150	0	0.00	#DIV/0!	Navajo	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
10.3	41	10.0	2/32	9.0	0.50	2.8	7	6	5/6	7150	1/17/08:30	200,000	1050	##	330,000

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA	IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION T B G
											#DIV/0!				
											#DIV/0!				
											#DIV/0!				
											#DIV/0!				

HYDRAULICS

SLOW PUMP

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD	60 spm	80 spm	100 spm
1	National	6	8.5	2.97	123	365							1	400	
2	National	6	8.5	2.97	0	0							2	400	
Both				5.94	123	365	172	189	1500	150					

DRILL STRING

GEOLOGIC

GENERAL INFO

BOTTOMHOLE ASSEMBLY	LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO
8 1/2" bit	1.00			Navajo	6,501	5,984		Rig No Unit 111
6 1/2 motor	30.00							Cell No 918-645-6671
23 5" HWDP	694.00							Last BOP Test 1/7
Jar	32.00							Next BOP Test 2/7
3 5" HWDP	90.00							Last Safety Meeting 1/17
CONFIDENTIAL				BOTTOMS UP TIME	BG GAS	GAS DATA CONN GAS	TRIP GAS	Last BOP Drill 1/16
				53	1 to 25	0	0	Last Operate Pipe Rar 1/17
				GAS UNITS	FROM	SHOWS TO	ROP (FT/HR)	Last Operate Blind Ra 1/17
								Last Operate Annular 1/7
Total BHA:	847.00			GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	LAST CASING NEXT CASING
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE				
160	50	200	130	200	5,736	17	5,753	5828 TD

SURVEYS

MD	INCL	AZMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL	MD	INCL	AZMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL

DAILY ACTIVITY

FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT
0:00	7:00	7.00	Burn wireline, retrieve line, RD & release Haliburton logging truck
7:00	17:00	10.00	Work stuck logging tool
17:00	18:00	1.00	RU Wave Gen pipe recovery
18:00	0:00	6.00	Work stuck logging tool w/ Wave gen, made 3' progress
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			6 am. Still working stuck logging tool
0:00			
0:00			
0:00			
0:00			
Daily Total	24.00		

COST DATA

24 hrs - midnight to midnight

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR		COUNTY, STATE	SPUD DATE	API#		SUPERVISOR
01/21/05	Wolverine Federal 17-3	Unit Rig #111		Sevier, UT	10-Dec	43-041-30036		Darren Naylor
DAYS F/SPUD	PRESENT OPERATIONS @ MIDNIGHT		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
43	POOH W/ catch # 2		7,150	0	0.00	#DIV/0!	Navajo	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
10.3	50	10.0	2/32	9.0	0.50	2.5	17	11	7/9	7150	1/21/09:00	200,000	960	##	330,000

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA	IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
															T	B	G
											#DIV/0!						
											#DIV/0!						
											#DIV/0!						
											#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECO	SLOW PUMP		
													60 spm	80 spm	100 spm
1	National	6	8.5	2.97	123	365							1	400	
2	National	6	8.5	2.97	0	0							2	400	
Both				5.94	123	365	172	189	1500	150					

DRILL STRING

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO		
5 3/4 overshot		5.00			Navajo	6,501	5,984		Rig No	Unit 111	
26 hwdp		784.00							Cell Nc	918-645-6671	
CONFIDENTIAL					GAS DATA			Last BOP Test	1/7		
					BOTTOMS UP TIME	BG GAS	CONN GAS	TRIP GAS	Next BOP Test	2/7	
					53	1 to 25	0	0	Last Safety Meeting	1/20	
					SHOWS			Last BOP Drill	1/20		
					GAS UNITS	FROM	TO	ROP (FT/HR)	Last Operate Pipe Ram	1/20	
									Last Operate Blind Ram	1/20	
Total BHA:		789.00							Last Operate Annular	1/7	
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	QL TO KB	KB ELEVATION	INTERMEDIATE CSG	LAST CASING	NEXT CASING	
160	50	200	130	200	5,736	17	5,753		5828	TD	

SURVEYS

MD	INCL	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL	MD	INCL	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL

DAILY ACTIVITY

FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT
0:00	1:00	1.00	Wait on fishing tools
1:00	6:00	5.00	Change grapple, RIH
6:00	7:30	1.50	Catch fish for 2nd time try to work loose. Top of fish 7064
7:30	11:30	4.00	POOH, no fish
11:30	12:00	0.50	Rig service, operate pipe & blind rams
12:00	16:30	4.50	Make up 3rd overshot, RIH
16:30	19:00	2.50	Catch fish for 3rd time try to work loose. Top of fish 7064
19:00	0:00	5.00	POOH, no fish
0:00			
0:00			
0:00			
0:00			
0:00			This am. RIH w/ 4th overshot
0:00			
0:00			
0:00			
0:00			
0:00			
Daily Total	24.00		

COST DATA

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
01/22/05	Wolverine Federal 17-3	Unit Rig #111	Sevier, UT	10-Dec	43-041-30036	Darren Naylor	
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
44	Logging	7,150	0	0.00	#DIV/0!	Navajo	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
10.2	66	10.0	2/32	8.8	0.50	2.5	20	29	14/18	7150	1/22/09:30	200,000	880	##	330,000

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd" or TFA)	IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION T B G
											#DIV/0!				
											#DIV/0!				
											#DIV/0!				
											#DIV/0!				

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD	60 spm	80 spm	100 spm
1	National	6	8.5	2.97	123	365							1	400	
2	National	6	8.5	2.97	0	0							2	400	
Both				5.94	123	365	172	189	1500	150					

SLOW PUMP

DRILL STRING					GEOLOGIC				GENERAL INFO	
BOTTOMHOLE ASSEMBLY	LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO		
5 3/4 overshot	5.00			Navajo	6,501	5,984		Rig No	Unit 11	
26 hwdp	784.00							Cell Nc	918-645-667	
CONFIDENTIAL								Last BOP Test	1/7	
				BOTTOMS UP TIME	BG GAS	GAS DATA CONN GAS	TRIP GAS	Next BOP Test	2/7	
				53	1 to 25	0	0	Last Safety Meeting	1/22	
						SHOWS		Last BOP Drill	1/22	
				GAS UNITS	FROM	TO	ROP (FT/HR)	Last Operate Pipe Rar	1/22	
								Last Operate Blind Ra	1/22	
								Last Operate Annular	1/7	
Total BHA:	789.00									
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG		
160	50	200	130	200	5,736	17	5,753			
									5828	
									TD	

SURVEYS

MD	INCL.	AZMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL	MD	INCL.	AZMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL

DAILY ACTIVITY

FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT
0:00	1:00	1.00	POOH, no fish, LD jars
1:00	1:30	0.50	Rig service
1:30	8:00	6.50	Change overshot RIH
8:00	9:30	1.50	Catch fish for 4th time try to work loose. Top of fish 7064
9:30	11:00	1.50	Circulate & condition f/ logs
11:00	15:30	4.50	POOH
15:30	17:00	1.50	Recovered 33' of fish including neutron source.LD fishing tools
17:00	17:30	0.50	Rig service
17:30	18:00	0.50	Rig up loggers
18:00	0:00	6.00	Logging Run # 1 Dual lateral log, Tool 96' long
0:00			Run # 2 Density Neutron, Tool 44' long
0:00			Run # 3 EMI tool 38' long
0:00			
0:00			
0:00			This am. 6:30 finished logging
0:00			
0:00			
0:00			
Daily Total		24.00	

(918) 599-9400

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
01/23/05	Wolverine Federal 17-3	Unit Rig #111	Sevier, UT	10-Dec	43-041-30036	Darren Naylor	
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
45	Running 5 1/2" production csg.	7,150	0	0.00	#DIV/0!	Navajo	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
10.2	65	9.0	2/32	10.0	0.50	2.5	19	22	12/16	7097	1/23/12:00	200,000	800	##	330,000

31 DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd) or TFA		IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
																T	B	G
												#DIV/0!						
												#DIV/0!						
												#DIV/0!						
												#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD	DOWN HOLE			
														60 spm	80 spm	100 spm
1	National	6	8.5	2.97	123	365							1	400		
2	National	6	8.5	2.97	0	0							2	400		
Both				5.94	123	365	172	189	1500	150						

SLOW PUMP

		60 spm	80 spm	100 spm
1		400		
2		400		

DRILL STRING

[illegible]

GEOLOGIC

FORMATION	MD	TVD	LITHOLOGY
Navajo	6,501	5,984	
GAS DATA			
BOTTOMS UP TIME	BG GAS	CONN GAS	TRIP GAS
53	1 to 25	0	0
SHOWS			
GAS UNITS	FROM	TO	ROP (FT/HR)
GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG
5,736	17	5,753	

GENERAL INFO

RIG INFO	
Rig No	Unit 11
Cell Nc	918-645-667
Last BOP Test	1/7
Next BOP Test	2/7
Last Safety Meeting	1/23
Last BOP Drill	1/23
Last Operate Pipe Ram	1/23
Last Operate Blind Ra	1/23
Last Operate Annular	1/7
LAST CASING	NEXT CASING
5828	TD

SURVEYS

[illegible]

DAILY ACTIVITY

FROM	TO	HRS	
0:00			24 HOURS - MIDNIGHT TO MIDNIGHT Logging Run # 2 Density Neutron, Tool 44' long
	7:30	7.50	Run # 3 EMI tool 38' long
7:30	11:30	4.00	RIH, to 7097, top of fish
11:30	14:00	2.50	Circulate & condition, pump pill to LD & run pipe
14:00	21:30	7.50	LD pipe & BHA, break kelly & spinner - CASING POINT @ 9:30 pm 1/23/05
21:30	0:00	2.50	RU & run 5 1/2" 17# L80 production csg.
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			
0:00			This am. Running pipe
0:00			
0:00			
0:00			
0:00			
0:00			
Daily Total		24.00	

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
01/24/05	Wolverine Federal 17-3	Unit Rig #111	Sevier, UT	10-Dec	43-041-30036	Darren Naylor	
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
46	RIG DOWN	7,100	-50	0.00	#DIV/0!	Navajo	6550' / 7100'

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd" or TFA)	IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM	WOB	DULL CONDITION
											#DIV/0!				T B G
											#DIV/0!				
											#DIV/0!				
											#DIV/0!				

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD	60 spm	80 spm	100 spm
1	National	6	8.5	2.97											
2	National	6	8.5	2.97											
Both				5.94											

SLOW PUMP

DRILL STRING				GEOLOGIC				GENERAL INFO			
BOTTOMHOLE ASSEMBLY	LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO			
				Navajo	6,501	5,984		Rig No	Unit 111		
								Cell Nc	918-645-6671		
								Last BOP Test	1/7		
								Next BOP Test	2/7		
								Last Safety Meeting	1/23		
								Last BOP Drill	1/23		
								Last Operate Pipe Rar	1/23		
								Last Operate Blind Ra	1/23		
								Last Operate Annular	1/7		
Total BHA:	0.00							Last CASING	NEXT CASING		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	5828		
					5,736	17	5,753		TD		

SURVEYS

MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL

DAILY ACTIVITY

FROM	TO	HRS	24 HOURS - MIDNIGHT TO MIDNIGHT
0:00			Run 172 jts. 5 1/2" 17# L80 LTC new production csg. Set @ 7100' kb with 5.38' of 6 1/2" x 2 1/2" drill collar welded to btm
0:00			to prevent future access to radioactive fish by drillout of this csg. Float collar set @ 7046' for 54' of cmt on top of fish.
6:00	6:00	6.00	NOTE: LEFT 50 FT OF LOGGING TOOL FISH IN HOLE BELOW CSG FROM 7100 - 7150' WITH CESIUM 137 RA SOUR
6:00	7:00	1.00	Circ. & condition RD casers & PULD machine
7:00	9:30	2.50	RU & cement w/ 680 sks 50/50 POZ cement mixed @ 14.35 lb/gal & 1.23 yield; red dye for marker in last 10 bbls. Calc TC
9:30	14:00	4.50	Set slips 100 % SW, ND, clean mud tanks. RELEASE RIG 14:00 1/24/05
14:00	0:00	10.00	Rig down prepare for move to WF #17-4 (slot D on this pad)
0:00			
0:00			
0:00			
0:00			Note: BLM, UDOGM, Utah Division of Radiation Control & US Nuclear Regulatory Agency (NRC) notified and approved t
0:00			abandonment
0:00			Note: Anticipate 4-5 days for rig move & spud. Rig down, set out & rig up required due to backwards rig move.
0:00			Unit Drig plans to R&R drawworks transmission, modifying rig for 5" drillpipe.
0:00			
0:00			FINAL DRLG REPORT THIS WELL - OFF REPT UNTIL COMPLETION BEGINS AFTER ALL WELLS DRILLED THIS P
0:00			
			AFE DHC below does not include supplemental coring AFE for \$466,000
Daily Total	24.00		

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB No. 1004-0137
Expires: March 31, 2007

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE- Other instructions on reverse side.

1. Type of Well
☐ Oil Well ☐ Gas Well ☒ Other

2. Name of Operator Wolverine Gas & Oil Co of Utah, LLC

3a. Address
One Riverfront Plaza, 55 Campau NW, Grand Rapids, MI3b. Phone No. (include area code)
616-458-1150

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

SHL: 1680' FNL & 2233' FWL

BHL: 1980' FSL & 660' FWL

5. Lease Serial No.

UTU-73528

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

Wolverine Fed Exploration Unit

8. Well Name and No.

Wolverine Federal #17-3

9. API Well No.

43-041-30036

10. Field and Pool, or Exploratory Area
Exploratory

11. County or Parish, State

Sevier Co, UT

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

TYPE OF ACTION

☒ Notice of Intent☐ Subsequent Report☐ Final Abandonment Notice☐ Acidize☐ Alter Casing☐ Casing Repair☐ Change Plans☐ Convert to Injection☐ Deepen☐ Fracture Treat☐ New Construction☐ Plug and Abandon☐ Plug Back☐ Production (Start/Resume)☐ Reclamation☐ Recomplete☐ Temporarily Abandon☐ Water Disposal☐ Water Shut-Off☐ Well Integrity☒ Other Suspend Operations

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Drilling operations were completed on Jan 24, 2005

Operations will be suspended until additional (total 5 wells) permitted wells can be drilled from the same drilling pad location, at which time completion operations will commence as soon thereafter as a well service rig becomes available. This well is secured with a cap flange.

PLEASE MAINTAIN ALL INFORMATION CONTAINED HEREIN CONFIDENTIAL - thank you

COPY SENT TO OPERATOR

Name: Steven R Hash
Title: Consulting Engineer - EXACT Engineering Inc
Date: 04/18/2005

RECEIVED

APR 21 2005

DIV. OF OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed)

Steven R Hash

Title Consulting Engineer - EXACT Engineering Inc

Signature

Steven R. Hash

Date

04/18/2005

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title

Accepted by the
Utah Division of
Oil, Gas and Mining

Office

Date

4/21/05

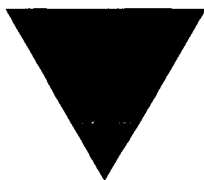
Federal Approval Of This
Action Is Necessary

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

By: [Signature]

CONFIDENTIAL



WOLVERINE GAS AND OIL COMPANY
of Utah, LLC

Energy Exploration in Partnership with the Environment

4304/30036
235 01W 17

August 23, 2005

CONFIDENTIAL

Ms. Diana Whitney
Utah Division of Oil, Gas & Mining
1594 W. N. Temple, Suite 1210
Salt Lake City, UT 84114-5801

Re: Wolverine Federal 17-3 Well
Completion Report

Dear Al:

Enclosed please find the Completion Report (form #8) for the captioned well. Attached to the report are the following documents:

- Addendum #1 - Electric & Mechanical Log List
- Addendum #2 - Perforation Details
- Directional Survey
- Core Descriptions
- Geologic Report
- Logs

Please keep this report and all attachments confidential. If you have any questions or concerns, please feel free to contact me.

Sincerely,

Helene Bardolph

enclosures

RECEIVED
SEP 25 2005
DIV. OF OIL, GAS & MINING

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

AMENDED REPORT ☐ FORM 8
(highlight changes)

5. LEASE DESIGNATION AND SERIAL NUMBER:
UTU-73528

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. TYPE OF WELL: OIL WELL ☒ GAS WELL ☐ DRY ☐ OTHER _____

b. TYPE OF WORK: NEW WELL ☒ HORIZ. LATS. ☐ DEEP-EN ☐ RE-ENTRY ☐ DIFF. RESVR. ☐ OTHER Well Completion

2. NAME OF OPERATOR:
Wolverine Gas and Oil Company of Utah, LLC

3. ADDRESS OF OPERATOR: 55 Campau NW CITY Grand Rapids STATE MI ZIP 49503 PHONE NUMBER: (616) 458-1150

4. LOCATION OF WELL (FOOTAGES)
AT SURFACE: 1,680' FNL & 2,233' FWL
AT TOP PRODUCING INTERVAL REPORTED BELOW: 562' FWL & 2152' FSL
AT TOTAL DEPTH: 435' FWL & 2013' FSL

7. UNIT or CA AGREEMENT NAME
Wolverine Federal Unit

8. WELL NAME and NUMBER:
Wolverine Federal 17-3

9. API NUMBER:
4304130036

10. FIELD AND POOL, OR WILDCAT
Covenant Field

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
NWSW 17 23S 1W S

12. COUNTY Sevier 13. STATE UTAH

14. DATE SPUDDED: 12/10/2004 15. DATE T.D. REACHED: 1/17/2005 16. DATE COMPLETED: 8/1/2005 ABANDONED ☐ READY TO PRODUCE ☒ 17. ELEVATIONS (DF, RKB, RT, GL): 5752,5753,5753,5736

18. TOTAL DEPTH: MD 7,150 TVD 6,603 19. PLUG BACK T.D.: MD 7,024 TVD 6,479 20. IF MULTIPLE COMPLETIONS, HOW MANY? * 21. DEPTH BRIDGE MD PLUG SET: TVD

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)

see addendum #1

23. WAS WELL CORED? NO ☐ YES ☒ (Submit analysis)
WAS DST RUN? NO ☒ YES ☐ (Submit report)
DIRECTIONAL SURVEY? NO ☐ YES ☒ (Submit copy)

24. CASING AND LINER RECORD (Report all strings set in well)

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
30	20	.25"wall	0	123		class G 620		surface cir	
17.5	16 H-40	65	0	615		AG300 855	175	surface cir	
12.25	9 5/8 P110	47	0	5,828		50/50 730	186	3600 Cal	
8.5	5 1/2 L80	17		7,100		50/50 680	149	4,830 CBL	

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 7/8	6,551							

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
(A) Navajo	6,498	7,150	5,975	6,603				Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/>
(B)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
(C)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
(D)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>

27. PERFORATION RECORD

28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
6590-6709	7-1/2% acid mix @1.15 sg and 4%KCl @1.04sg Total - 1900 gal.
6590-6709	15% NcFeHCL w/500 ball sealers Total - 4600 gal

29. ENCLOSED ATTACHMENTS:

☒ ELECTRICAL/MECHANICAL LOGS ☒ GEOLOGIC REPORT ☐ DST REPORT ☒ DIRECTIONAL SURVEY
☐ SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION ☒ CORE ANALYSIS ☐ OTHER: _____

30. WELL STATUS:

Producing

RECEIVED
AUG
SEP 25 2005

Completion Procedure (new well)
WOLVERINE GAS & OIL CO of UTAH, LLC
Wolverine Federal #17-3
1680' fnl & 2233' fwl of Sec
Sec 17 T23S – R01W
Sevier Co., UT

July 15, 2005
API# 43-041-30036
GL: 5736 KB: 5753
Spud: 12/10/2004
TD: 01/17/05
RR: 01/24/05

Well Data:

Conductor casing: 20" @ 123' bgl w/ 620 sx class G cmt, full circ

Surface casing: 16" 65ppf H40 BTC new (14 jts) set @ 615' kb with 855 sx of AG300 cmt mixed @ 15.8ppg & 1.15 cfps. Circ 25 bbls to pit. TOC at surface.

Intermediate casing: 9-5/8" 47ppf HC-P110 LTC 8rd new (125 jts) set @ 5828' kb with 730 sx of 50:50 POZ. Good circ throughout, TOC unknown.

Production casing: 5-1/2" 17.0ppf L80 LTC 8rd (172 jts) set @ 7100' (incl marker jt @ 6030 – 6050 kb) with 680 sx 50:50 POZ.

PBTD: TD 7150'; FS @ 7100; FC @ 7046', PBTD 7046'. Hole full of fresh, untreated water.

Casinghead: 9-5/8" SOW x 11" 5m

Tubinghead: 11" 5m x 7-1/16" 5m w/ (2) 2-1/16" 5m FE casing valves

Wellhead: 7-1/16" 5m x 7-1/16" 3m GT6 adapter spool w/ hammer nut; 2-7/8" 6.5 EUE tbg nipple, 2-9/16" 5M gate valve w/ 2-7/8" EUE run x 2" LP x 1" LP flow cross.

Casing specs: 5-1/2" 17.0ppf L80 id: 4.892" drift: 4.767"
collapse: 6280 psi burst: 7740 psi
weak pt collapse @ TOC @ ~5000'; weak pt burst @ surface
maximum allowable casing pressure = 6200 psig max w/ csg saver; 5000 psi w/o
Capacity: 5-1/2" 17.0ppf: 0.02324 bbl/ft 0.1305 cuft/ft

Tubing specs: 2-7/8" 6.5ppf N80 EUE 8rd API new
id: 2.441 drift: 2.347 cplg od: 3.668
collapse: 11160 psi (80%~8900psig max)
burst: 10570 psi (80%~8400 psig max)
pull=144,960 lbs (80%= 116,000 lbs max) 116-46=70,000# max ind wt if on btm
Capacity: 2-7/8" 0.005794 bbl/ft 0.03253 cuft/ft
Annulus: 2-7/8 x 5-1/2 = 0.01521 bbl/ft 0.0854 cuft/ft

Proposed perfs:

set	Zone	Interval	Ft	Density	# holes	Phasing	Diam	Pene
(1)	Upr Navajo 1	6590-6600	10	6 jpf	60	60	.41	45"
(2)	Upr Navajo 1	6615-6619	4	6 jpf	24	60	.41	45"
(3)	Upr Navajo 1	6632-6644	12	6 jpf	72	60	.41	45"
(4)	Upr Navajo 1	6654-6662	8	6 jpf	48	60	.41	45"
(5)	Upr Navajo 1	6671-6678	7	6 jpf	42	60	.41	45"
(6)	Upr Navajo 1	6702-6709	7	6 jpf	42	60	.41	45"
	total	119 gross	48		288			

CONFIDENTIAL

ADDENDUM #1

Electric & Mechanical Log List

**Wolverine Federal 17-3
1680' FNL & 2233' FWL, Sec 17, T23S, R1W
Sevier County, Utah
API# 43-041-30036**

Six Arm Dipmeter Monitor Log
Dual Laterolog MSFL - MD
Dual Laterolog MSFL - TVD
Spectral Density Dual Spaced Neutron - MD
Spectral Density Dual Spaced Neutron - TVD
Spectral Density Dual Spaced Neutron Limestone Matrix - MD
Spectral Density Dual Spaced Neutron Limestone Matrix - TVD

ADDENDUM #2

Perforation Details

**Wolverine Federal 17-3
1680' FNL & 2233' FWL, Sec 17, T23S, R1W
Sevier County, Utah
API# 43-041-30036**

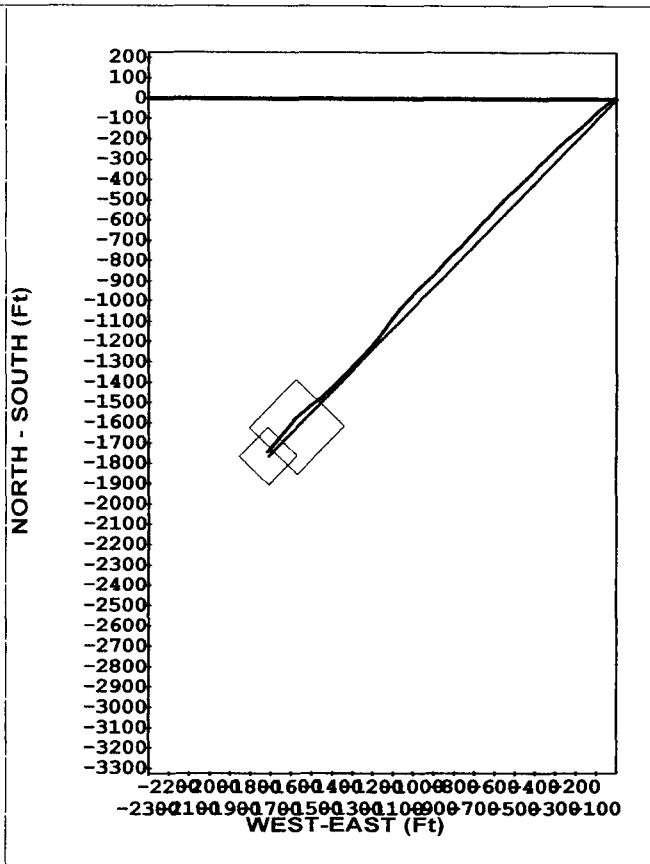
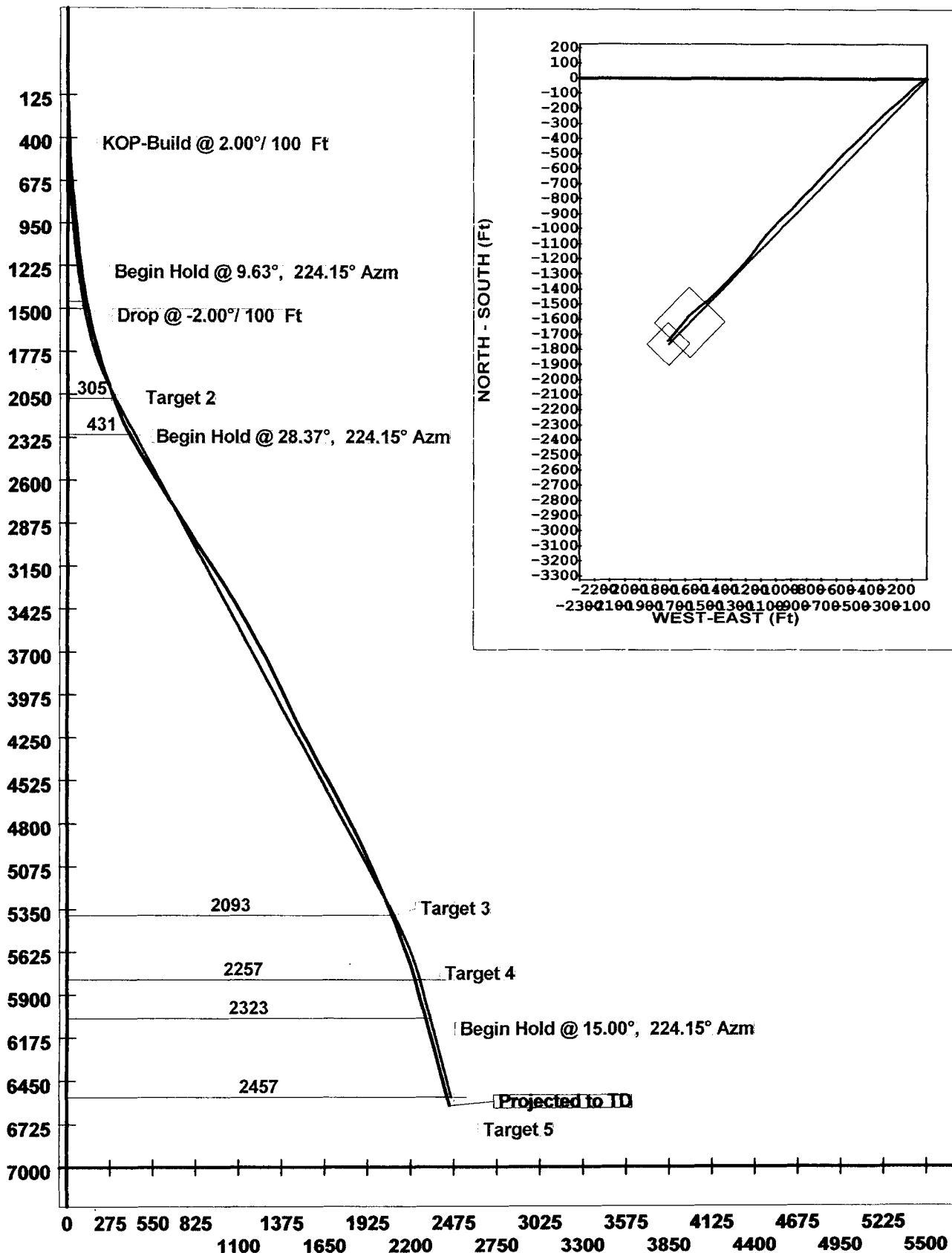
Perforations:

(1)	Upr Navajo 1	6590-6600	10	6 jpf	60	0	.41	45"
(2)	Upr Navajo 1	6615-6619	4	6 jpf	24	60	.41	45"
(3)	Upr Navajo 1	6632-6644	12	6 jpf	72	60	.41	45"
(4)	Upr Navajo 1	6654-6662	8	6 jpf	48	60	.41	45"
(5)	Upr Navajo 1	6671-6678	7	6 jpf	42	60	.41	45"
(6)	Upr Navajo 1	6702-6709	7	6 jpf	42	60	.41	45"
		total 119 gross	48		288			

Company: Wolverine Oil & Gas Co. of Utah, LLC
 Lease/Well: Federal 17-3
 Location: South Sigurd
 State/Country: Sevier Co. Ut.



TRUE VERTICAL DEPTH (Ft)



— Work Curve - - Plain Curve

VERTICAL SECTION (Ft) @ 226.08°



Job Number: WYL1204D229

State/Country: Sevier Co. Ut.

Company: Wolverine Oil & Gas Co. of Utah, LL

Declination: 12.95

Lease/Well: Federal 17-3

Grid:

Location: South Sigurd

File name: A:\17-3.SVY

Rig Name: Unit 111

Date/Time: 02-Feb-05 / 09:18

RKB: 17'

Curve Name: Work Curve

G.L. or M.S.L.:

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 226.08
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	Course Length FT	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100	CLOSURE Distance FT	Direction Deg
.00	.00	.00		.00	.00	.00	.00	.00	.00	.00
162.00	.20	292.60	162.00	162.00	.11	-.26	.11	.12	.28	292.60
222.00	.80	250.40	60.00	222.00	.01	-.75	.54	1.11	.75	270.64
316.00	2.00	248.70	94.00	315.97	-.81	-2.90	2.65	1.28	3.01	254.43
408.00	2.80	246.40	92.00	407.89	-2.29	-6.45	6.24	.88	6.85	250.46
499.00	3.30	229.20	91.00	498.76	-4.89	-10.47	10.94	1.14	11.56	244.96
548.00	3.90	233.60	49.00	547.66	-6.80	-12.88	14.00	1.35	14.57	242.16
651.00	4.90	239.50	103.00	650.36	-11.11	-19.49	21.75	1.06	22.44	240.31
742.00	5.50	245.30	91.00	740.98	-14.91	-26.80	29.65	.88	30.67	240.92
831.00	6.40	242.00	89.00	829.50	-19.02	-35.06	38.45	1.08	39.88	241.52
920.00	6.70	238.50	89.00	917.92	-24.06	-43.86	48.29	.56	50.03	241.25
1011.00	6.20	236.20	91.00	1008.35	-29.57	-52.47	58.31	.62	60.23	240.60
1103.00	6.00	228.30	92.00	1099.83	-35.53	-60.19	68.00	.94	69.90	239.45
1195.00	6.70	227.10	92.00	1191.26	-42.38	-67.71	78.17	.77	79.88	237.96
1286.00	8.40	228.10	91.00	1281.47	-50.44	-76.55	90.13	1.87	91.67	236.62
1379.00	9.20	227.60	93.00	1373.37	-59.99	-87.10	104.35	.86	105.76	235.44
1470.00	11.00	228.30	91.00	1462.96	-70.67	-98.95	120.29	1.98	121.60	234.47
1561.00	12.80	228.60	91.00	1552.00	-83.11	-113.00	139.04	1.98	140.27	233.67
1653.00	14.20	227.10	92.00	1641.46	-97.53	-128.91	160.51	1.57	161.65	232.89
1745.00	15.60	224.90	92.00	1730.36	-113.98	-145.91	184.16	1.64	185.15	232.00
1838.00	16.60	228.60	93.00	1819.72	-131.62	-164.70	209.93	1.54	210.83	231.37
1928.00	18.00	228.50	90.00	1905.64	-149.34	-184.76	236.67	1.56	237.57	231.05
2021.00	18.70	230.60	93.00	1993.91	-168.32	-207.04	265.89	1.04	266.83	230.89
2083.00	20.10	230.70	62.00	2052.39	-181.38	-222.97	286.42	2.26	287.42	230.87
2144.00	21.60	229.30	61.00	2109.40	-195.34	-239.59	308.08	2.59	309.13	230.81

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	Course Length FT	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100	CLOSURE Distance FT	Direction Deg
2206.00	23.10	227.20	62.00	2166.74	-211.05	-257.17	331.63	2.74	332.68	230.63
2268.00	24.80	226.70	62.00	2223.40	-228.23	-275.56	356.80	2.76	357.80	230.37
2329.00	26.90	226.90	61.00	2278.29	-246.43	-294.95	383.39	3.45	384.35	230.12
2391.00	28.80	225.10	62.00	2333.11	-266.56	-315.77	412.35	3.35	413.24	229.83
2483.00	31.10	224.50	92.00	2412.82	-299.16	-348.12	458.27	2.52	459.00	229.33
2575.00	31.70	224.40	92.00	2491.34	-333.37	-381.69	506.18	.65	506.78	228.87
2667.00	31.90	225.50	92.00	2569.53	-367.68	-415.94	554.65	.67	555.15	228.52
2758.00	32.40	225.50	91.00	2646.58	-401.62	-450.48	603.07	.55	603.52	228.28
2850.00	32.50	227.60	92.00	2724.22	-435.57	-486.31	652.43	1.23	652.85	228.15
2942.00	33.20	226.70	92.00	2801.51	-469.51	-522.89	702.32	.93	702.75	228.08
3035.00	32.70	224.60	93.00	2879.55	-504.86	-559.06	752.89	1.34	753.28	227.92
3126.00	32.00	223.40	91.00	2956.43	-539.88	-592.89	801.55	1.04	801.87	227.68
3219.00	33.20	221.90	93.00	3034.77	-576.74	-626.83	851.56	1.56	851.78	227.38
3311.00	33.00	221.40	92.00	3111.84	-614.28	-660.22	901.66	.37	901.79	227.06
3402.00	33.80	221.60	91.00	3187.81	-651.79	-693.41	951.59	.89	951.66	226.77
3464.00	33.60	222.50	62.00	3239.40	-677.34	-716.45	985.90	.87	985.94	226.61
3524.00	32.00	223.70	60.00	3289.83	-701.07	-738.65	1018.36	2.88	1018.39	226.50
3586.00	29.90	225.10	62.00	3343.00	-723.86	-760.95	1050.23	3.58	1050.25	226.43
3647.00	30.30	226.40	61.00	3395.77	-745.20	-782.86	1080.82	1.25	1080.84	226.41
3708.00	30.20	225.10	61.00	3448.47	-766.65	-804.88	1111.55	1.09	1111.56	226.39
3770.00	30.70	224.40	62.00	3501.92	-788.96	-826.99	1142.96	.99	1142.97	226.35
3839.00	29.50	221.80	69.00	3561.61	-814.21	-850.64	1177.51	2.57	1177.51	226.25
3901.00	28.60	222.80	62.00	3615.81	-836.48	-870.90	1207.55	1.65	1207.55	226.15
3962.00	28.80	222.70	61.00	3669.32	-857.99	-890.79	1236.79	.34	1236.79	226.07
4045.00	27.30	225.10	83.00	3742.57	-886.12	-917.83	1275.78	2.26	1275.78	226.01
4136.00	26.10	224.60	91.00	3823.87	-915.11	-946.67	1316.66	1.34	1316.66	225.97
4228.00	25.60	224.60	92.00	3906.66	-943.67	-974.83	1356.76	.54	1356.76	225.93
4320.00	25.20	224.10	92.00	3989.77	-971.89	-1002.42	1396.20	.49	1396.21	225.89
4412.00	25.10	223.20	92.00	4073.05	-1000.18	-1029.41	1435.27	.43	1435.28	225.83
4474.00	25.90	223.20	62.00	4129.01	-1019.63	-1047.68	1461.92	1.29	1461.94	225.78
4535.00	26.70	221.40	61.00	4183.69	-1039.63	-1065.86	1488.89	1.85	1488.92	225.71
4597.00	27.50	218.30	62.00	4238.89	-1061.31	-1083.95	1516.96	2.62	1517.01	225.60
4658.00	28.20	216.00	61.00	4292.82	-1084.02	-1101.15	1545.10	2.10	1545.19	225.45
4719.00	28.40	214.80	61.00	4346.53	-1107.59	-1117.90	1573.52	.99	1573.68	225.27
4780.00	28.40	215.40	61.00	4400.19	-1131.33	-1134.58	1602.00	.47	1602.24	225.08
4841.00	29.30	215.80	61.00	4453.62	-1155.26	-1151.71	1630.94	1.51	1631.28	224.91
4902.00	29.80	217.00	61.00	4506.69	-1179.47	-1169.57	1660.60	1.27	1661.04	224.76
4963.00	29.70	218.80	61.00	4559.65	-1203.36	-1188.16	1690.55	1.47	1691.09	224.64
5024.00	28.90	220.70	61.00	4612.84	-1226.31	-1207.24	1720.22	2.01	1720.83	224.55
5086.00	28.20	221.90	62.00	4667.30	-1248.57	-1226.79	1749.75	1.46	1750.42	224.50
5147.00	27.40	224.80	61.00	4721.27	-1269.26	-1246.31	1778.16	2.58	1778.85	224.48
5208.00	27.20	225.10	61.00	4775.47	-1289.06	-1266.08	1806.13	.40	1806.83	224.48
5269.00	26.10	223.90	61.00	4829.99	-1308.57	-1285.26	1833.48	2.01	1834.19	224.49
5331.00	26.00	223.90	62.00	4885.69	-1328.19	-1304.14	1860.69	.16	1861.41	224.48
5391.00	25.30	225.60	60.00	4939.78	-1346.64	-1322.42	1886.65	1.69	1887.38	224.48

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	Course Length FT	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100	CLOSURE Distance FT	Direction Deg
5453.00	24.20	226.50	62.00	4996.08	-1364.65	-1341.10	1912.60	1.88	1913.33	224.50
5515.00	23.80	225.60	62.00	5052.72	-1382.15	-1359.26	1937.82	.87	1938.54	224.52
5576.00	23.90	224.60	61.00	5108.52	-1399.56	-1376.73	1962.48	.68	1963.20	224.53
5637.00	23.40	224.20	61.00	5164.39	-1417.05	-1393.85	1986.94	.86	1987.67	224.53
5699.00	22.70	225.10	62.00	5221.44	-1434.32	-1410.91	2011.21	1.26	2011.94	224.53
5773.00	22.70	227.40	74.00	5289.71	-1454.06	-1431.53	2039.76	1.20	2040.48	224.55
5851.00	22.00	229.70	78.00	5361.85	-1473.70	-1453.75	2069.39	1.44	2070.07	224.61
5942.00	21.00	231.10	91.00	5446.52	-1494.96	-1479.44	2102.64	1.24	2103.25	224.70
6035.00	20.90	230.00	93.00	5533.37	-1516.09	-1505.12	2135.79	.44	2136.33	224.79
6126.00	20.40	229.70	91.00	5618.53	-1536.78	-1529.65	2167.81	.56	2168.30	224.87
6218.00	18.90	229.00	92.00	5705.17	-1556.93	-1553.12	2198.70	1.65	2199.14	224.93
6309.00	14.90	227.20	91.00	5792.22	-1574.56	-1572.84	2225.13	4.43	2225.54	224.97
6400.00	14.80	222.80	91.00	5880.18	-1591.03	-1589.32	2248.43	1.24	2248.85	224.97
6493.00	14.80	219.70	93.00	5970.10	-1608.89	-1604.98	2272.09	.85	2272.55	224.93
6567.00	15.90	219.70	74.00	6041.46	-1623.96	-1617.49	2291.56	1.49	2292.06	224.89
6619.00	15.90	219.70	52.00	6091.47	-1634.92	-1626.59	2305.72	.00	2306.24	224.85
Projected to TD										
7150.00	15.00	220.00	531.00	6603.27	-1743.53	-1717.23	2446.33	.17	2447.19	224.56

CORE DESCRIPTIONS

**Wolverine Gas & Oil Corporation
Wolverine Federal #17-3
NW/SW Sec. 17,T23S,R1W
Sevier Co., Utah**

Core #1	6619-6644	Cut 25'	Recovered 25'
6619-22	SANDSTONE-light brown, clear, quartzose, very fine(upper) to coarse(lower) grained, sub angular, fair to poor sorted, clay matrix, calcareous cement, friable, massive, inter dune deposit, 6-10% intergranular porosity, hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.		
6622-25	SANDSTONE-light brown, clear, quartzose, very fine(upper) to medium(upper) grained, sub angular, fair to poor sorted, clay matrix, calcareous cement, friable, massive, inter dune deposit, 6-10% intergranular porosity, hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.		
6625-28	SANDSTONE-light brown, clear, quartzose, very fine(upper) to medium(lower) grained, sub angular, fair to poor sorted, clay matrix, calcareous cement, friable, massive, inter dune deposit, 6-10% intergranular porosity, hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.		
6628-31	SANDSTONE-light brown, clear, quartzose, very fine(upper) to medium(upper) grained, predominately very fine to fine grained, sub angular, fair to poor sorted, clay matrix, calcareous cement, friable, massive, inter dune deposit, 6-10% intergranular porosity, hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.		
6631-34	SANDSTONE-light brown, clear, quartzose, very fine(upper) to medium(upper) grained, predominately very fine to fine grained, sub angular, fair to poor sorted, clay matrix, calcareous cement, friable, massive, inter dune deposit, plant root lets, 6-10% intergranular porosity, hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.		

- 6634-37 SANDSTONE-light brown, clear, quartzose, fine(lower) to medium(upper) grained, predominatly very fine to fine grained, sub angular, fair to poor sorted, clay matrix, calcareous cement, friable, massive, inter dune deposit, mottled with white anhydrite, no oil stain when anhydrite present, 6-10% intergranular porosity, hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.
- 6637-40 SANDSTONE-light brown, clear, quartzose, fine(lower) to course(lower) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, live brown oil on sepersation surface, 10-14% intergranular porosity, hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.
- 6640-43 SANDSTONE-light brown, clear, quartzose, fine(lower) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded(35deg), poker chipped in part, 10-14% intergranular porosity, hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.
- 6644 SANDSTONE-light brown, clear, quartzose, fine(upper) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded(35deg), poker chipped in part, 10-14% intergranular porosity, hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.

CORE DESCRIPTIONS

**Wolverine Gas & Oil Corporation
Wolverine Federal #17-3
NW/SW Sec. 17,T23S,R1W
Sevier Co., Utah**

Core #2	6644-6666	Cut 22'	Recovered 22'
6644-47	SANDSTONE-light brown, clear, quartzose, very fine(upper) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bed laminations(35deg), poker chipped in part, rubblized in part, banded with silica fracture fill, hard and tight streaks, mottled and spotty oil stain, hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.		
6647-50	SANDSTONE-light brown, clear, quartzose, very fine(upper) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, 8-10% intergranular porosity, cross bed laminations(35deg), poker chipped in part, rubblized in part, even oil stain, strong hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.		
6650-53	SANDSTONE-light brown, clear, quartzose, very fine(upper) to medium (upper) grained, predominately very fine to fine grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, 8-10% intergranular porosity, cross bed laminations(35deg), 50-60 degree fracture planes, poker chipped in part, rubblized in part, even oil stain, strong hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.		
6653-56	SANDSTONE-light brown, clear, quartzose, fine(upper) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, 10-14% intergranular porosity, cross bed laminations(35deg), 50-60 degree fracture planes, poker chipped in part, rubblized in part, gas and oil bubbling from pores, scattered quartz fracture fill, even oil stain, strong hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.		

- 6656-59 SANDSTONE-light brown, clear, quartzose, fine(upper) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, 10-14% intergranular porosity, cross bed laminations(35deg), 50-60 degree fracture planes, slabled in part, rubblized in part, gas and oil on fracture faces, scattered quartz fracture fill, even oil stain, strong hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.
- 6659-62 SANDSTONE-light brown, clear, quartzose, fine(upper) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, 10-14% intergranular porosity, cross bed laminations(35deg), 50-60 degree fracture planes, slabled in part, rubblized in part, gas and oil on fracture faces, scattered quartz fracture fill, even oil stain, strong hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.
- 6662-65 SANDSTONE-light brown, clear, quartzose, very fine(upper) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, 10-14% intergranular porosity, cross bed laminations(35deg), 50-60 degree fracture planes, slabled in part, rubblized in part, gas and oil on fracture faces, scattered quartz fracture fill, even oil stain, strong hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.
- 6666 SANDSTONE-light brown, white, clear, quartzose, very fine(upper) to fine (upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, tight, rubblized in part, quartz fracture fill, even oil stain, strong hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.

CORE DESCRIPTIONS

**Wolverine Gas & Oil Corporation
Wolverine Federal #17-3
NW/SW Sec. 17,T23S,R1W
Sevier Co., Utah**

Core #3	6666-89	Cut 23'	Recovered 22'
6666-69	SANDSTONE-light brown, white, clear, quartzose, very fine(upper) to medium (lower) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, tight, rubblized in part, quartz fracture fill, mottled oil stain, strong hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.		
6669-72	SANDSTONE-light brown, white, clear, quartzose, very fine(upper) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, tight, rubblized in part, quartz fracture fill, even oil stain, strong hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.		
6672-75	SANDSTONE-light brown, white, clear, quartzose, fine(upper) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, rubblized in part,10-14% intergranular porosity, cross bedded, even oil stain, strong hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.		
6675-78	SANDSTONE-light brown, white, clear, quartzose, fine(upper) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, rubblized in part,10-14% intergranular porosity, cross bedded, even oil stain, strong hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.		
6678-81	SANDSTONE-light brown, white, clear, quartzose, fine(upper) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, rubblized in part, 8-10% intergranular porosity, cross bedded, tight in mottled zone, mottled oil stain in part, strong hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.		

- 6681-84 SANDSTONE-light brown, white, clear, quartzose, fine(upper) to medium (lower) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, rubblized in part, 8-12% intergranular porosity, cross bedded, tight in mottled zone, mottled oil stain in part, strong hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.
- 6684-87 SANDSTONE-light brown, white, clear, quartzose, very fine(lower) to very fine (upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, tight, clay filled, mottled stain, weak show, thin residual ring.
- 6687-89 SANDSTONE-light brown, white, clear, quartzose, very fine(lower) to very fine (upper) grained, sub angular, fair to poor sorted, clay matrix, dolomite cement, tight, clay filled, no stain, weak to no show.

CORE DESCRIPTIONS

**Wolverine Gas & Oil Corporation
Wolverine Federal #17-3
NW/SW Sec. 17,T23S,R1W
Sevier Co., Utah**

Core #4	6739-97	Cut 58'	Recovered 58'
6739	SILTSTONE-red brown, silty, sandy, argillaceous, dolomitic, hard, tight, massive, weak-no show, 60 degree fractures filled with white calcite, minor wavy to inclined depositional laminations.		
6742	SILTSTONE-red brown, silty, sandy, argillaceous, dolomitic, hard, tight, massive, weak-no show, 60 degree fractures filled with white calcite, minor wavy to inclined depositional laminations.		
6745	SILTSTONE-red brown, silty, sandy, scattered very fine (lower) sand, argillaceous, dolomitic, hard, tight, massive, weak-no show, 60 degree fractures filled with white calcite, minor wavy to inclined depositional laminations.		
6748	SILTSTONE-light red orange, red brown, silty, sandy, scattered very fine (lower) sand, argillaceous, dolomitic, hard, tight, massive, weak-no show, 60 degree fractures filled with white calcite, minor wavy to inclined depositional laminations.		
6751	SILTSTONE-light red orange, red brown, silty, sandy, scattered very fine (lower) sand, argillaceous, dolomitic, hard, tight, massive, weak-no show, 60 degree fractures filled with white calcite, minor wavy to inclined depositional laminations.		
6754	SHALE-medium to dark red brown, silty, arenaceous, dolomitic, massive, hard, scattered wavy to inclined depositional laminations.		
6757	SHALE-medium to dark red brown, silty, arenaceous, dolomitic, massive, hard, scattered wavy to inclined depositional laminations.		
6758	SHALE-medium to dark red brown, silty, arenaceous, dolomitic, massive, hard, scattered wavy to inclined depositional laminations, 15 degree contact surface with under laying sandstone, abundant slickensides at contact.		

- 6760 SANDSTONE-white, light gray, clear, quartzose, very fine(lower) to very fine(upper) grained, clay matrix, dolomitic cement, firm to hard, tight, no to weak show, massive.
- 6763 SANDSTONE-white, light gray, clear, quartzose, very fine(lower) to very fine(upper) grained, clay matrix, dolomitic cement, firm to hard, tight, no to weak show, massive.
- 6766 SANDSTONE-pink, white, becoming light brown, clear, quartzose, very fine(lower) to fine(lower) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, even light yellow oil fluorescence, light brown oil stain, yellow to gold milky cut fluorescence, yellow gold residual ring cut, 10-12% intergranular porosity.
- 6769 SANDSTONE-pink, white, becoming light brown, clear, quartzose, very fine(lower) to fine(upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, even light yellow oil fluorescence, light brown oil stain, yellow to gold milky cut fluorescence, yellow gold residual ring cut, 10-12% intergranular porosity.
- 6772 SANDSTONE-light brown, clear, quartzose, very fine(upper) to medium(lower) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, even light yellow oil fluorescence, brown oil stain, yellow to gold milky cut fluorescence, yellow gold residual ring cut, 10-14% intergranular porosity, strong hydrocarbon odor, bleeding oil and gas.
- 6775 SANDSTONE-light brown, clear, quartzose, fine(lower) to medium(upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, even light yellow oil fluorescence, brown oil stain, yellow to gold milky cut fluorescence, yellow gold residual ring cut, 10-14% intergranular porosity, strong hydrocarbon odor, bleeding gas and oil.
- 6778 SANDSTONE-light brown, clear, quartzose, fine(lower) to medium(upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, even light yellow oil fluorescence, brown oil stain, yellow to gold milky cut fluorescence, yellow gold residual ring cut, 10-14% intergranular porosity, strong hydrocarbon odor, bleeding gas and oil.

- 6781 SANDSTONE-light brown, tan, clear, quartzose, fine(lower) to medium(upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, even light yellow oil fluorescence, brown oil stain, yellow to gold milky cut fluorescence, yellow gold residual ring cut, 10-14% intergranular porosity, strong hydrocarbon odor, bleeding gas and oil.
- 6784 SANDSTONE-light brown, tan, clear, quartzose, very fine(upper) to medium(lower) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, even light yellow oil fluorescence, brown oil stain, yellow to gold milky cut fluorescence, yellow gold residual ring cut, 10-14% intergranular porosity, strong hydrocarbon odor, bleeding gas and oil.
- 6787 SANDSTONE-light brown, tan, clear, quartzose, very fine(upper) to fine(upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, even light yellow oil fluorescence, brown oil stain, yellow to gold milky cut fluorescence, yellow gold residual ring cut, 10-14% intergranular porosity, strong hydrocarbon odor, bleeding gas and oil.
- 6790 SANDSTONE-light brown, tan, clear, quartzose, fine(lower) to fine(upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, even light yellow oil fluorescence, brown oil stain, yellow to gold milky cut fluorescence, yellow gold residual ring cut, 10-14% intergranular porosity, strong hydrocarbon odor, bleeding gas and oil.
- 6793 SANDSTONE-dark brown, clear, quartzose, fine(lower) to medium(upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, even light yellow oil fluorescence, brown oil stain, yellow to gold milky cut fluorescence, yellow gold residual ring cut, 10-14% intergranular porosity, strong hydrocarbon odor, bleeding gas and oil.
- 6796 SANDSTONE-dark brown, clear, quartzose, fine(lower) to medium(upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, even light yellow oil fluorescence, brown oil stain, yellow to gold milky cut fluorescence, yellow gold residual ring cut, 10-14% intergranular porosity, strong hydrocarbon odor, bleeding gas and oil.

6797 SANDSTONE-dark brown, clear, quartzose, fine(lower) to medium(upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, even light yellow oil fluorescence, brown oil stain, yellow to gold milky cut fluorescence, yellow gold residual ring cut, 10-14% intergranular porosity, strong hydrocarbon odor, bleeding gas and oil.

CORE DESCRIPTIONS

**Wolverine Gas & Oil Corporation
Wolverine Federal #17-3
NW/SW Sec. 17,T23S,R1W
Sevier Co., Utah**

Core #5	6797-6817	Cut 20'	Recovered 18.5'
6800	SANDSTONE-dark brown, clear, quartzose, fine(lower) to medium(lower) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, 10-16% intergranular porosity, brown oil stain, strong hydrocarbon odor, bleeding oil and gas, even yellow oil fluorescence, yellow gold milky cut fluorescence, yellow gold residual ring.		
6803	SANDSTONE-dark brown, clear, quartzose, fine(lower) to medium(lower) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, 10-16% intergranular porosity, brown oil stain, strong hydrocarbon odor, bleeding oil and gas, even yellow oil fluorescence, yellow gold milky cut fluorescence, yellow gold residual ring.		
6806	SANDSTONE-dark brown, clear, quartzose, fine(lower) to medium(lower) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, 10-16% intergranular porosity, brown oil stain, strong hydrocarbon odor, bleeding oil and gas, even yellow oil fluorescence, yellow gold milky cut fluorescence, yellow gold residual ring.		
6809	SANDSTONE-dark brown, clear, quartzose, fine(lower) to medium(lower) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, 10-16% intergranular porosity, brown oil stain, strong hydrocarbon odor, bleeding oil and gas, even yellow oil fluorescence, yellow gold milky cut fluorescence, yellow gold residual ring.		
6812	SANDSTONE-dark brown, clear, quartzose, fine(lower) to medium(lower) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, 10-16% intergranular porosity, brown oil stain, strong hydrocarbon odor, bleeding oil and gas, even yellow oil fluorescence, yellow gold milky cut fluorescence, yellow gold residual ring.		

- 6814.5 SANDSTONE-dark brown, clear, quartzose, fine(lower) to medium(lower) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, 10-16% intergranular porosity, brown oil stain, strong hydrocarbon odor, bleeding oil and gas, even yellow oil fluorescence, yellow gold milky cut fluorescence, yellow gold residual ring.
- 6815.5 SANDSTONE-dark brown, clear, quartzose, fine(lower) to medium(lower) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, 10-16% intergranular porosity, brown oil stain, strong hydrocarbon odor, bleeding oil and gas, even yellow oil fluorescence, yellow gold milky cut fluorescence, yellow gold residual ring.

CORE DESCRIPTIONS

**Wolverine Gas & Oil Corporation
Wolverine Federal #17-3
NW/SW Sec. 17,T23S,R1W
Sevier Co., Utah**

Core #6	6817-52	Cut 35'	Recovered 16.7'
6817	SANDSTONE-dark brown, white, clear, quartzose, very fine(upper) to medium(lower) grained, subangular, fair to poor sorted, clay matrix, siliceous cement, friable, crumbles and loose in part, cross bedded, 10-16% intergranular porosity, brown oil stain, strong hydrocarbon odor, bleeding gas and oil on fracture faces, light yellow oil fluorescence, yellow gold milky cut fluorescence, yellow gold residual ring cut.		
6820	SANDSTONE-light brown, white, clear, quartzose, very fine(upper) to medium(lower) grained, subangular, fair to poor sorted, clay matrix, siliceous cement, friable, crumbles and loose in part, cross bedded, 10-16% intergranular porosity, brown oil stain, strong hydrocarbon odor, bleeding gas and oil on fracture faces, light yellow oil fluorescence, yellow gold milky cut fluorescence, yellow gold residual ring cut.		
6823	SANDSTONE-dark brown, white, clear, quartzose, very fine(upper) to medium(lower) grained, subangular, fair to poor sorted, clay matrix, siliceous cement, friable, crumbles and loose in part, cross bedded, 10-16% intergranular porosity, brown oil stain, strong hydrocarbon odor, bleeding gas and oil on fracture faces, light yellow oil fluorescence, yellow gold milky cut fluorescence, yellow gold residual ring cut.		
6826	SANDSTONE-light brown, white, clear, quartzose, fine(upper) to medium(upper) grained, subangular, fair to poor sorted, clay matrix, siliceous cement, friable, crumbles and loose in part, cross bedded, 10-16% intergranular porosity, brown oil stain, strong hydrocarbon odor, bleeding gas and oil on fracture faces, light yellow oil fluorescence, yellow gold milky cut fluorescence, yellow gold residual ring cut.		
6829	SANDSTONE-dark brown, white, clear, quartzose, fine(lower) to medium(lower) grained, subangular, fair to poor sorted, clay matrix, siliceous cement, friable, crumbles and loose in part, cross bedded, 10-16% intergranular porosity, brown oil stain, strong hydrocarbon odor, bleeding gas and oil on fracture faces, light yellow oil fluorescence, yellow gold milky cut fluorescence, yellow gold residual ring cut.		

- 6832 SANDSTONE-dark brown, white, clear, quartzose, fine(lower) to medium(lower) grained, subangular, fair to poor sorted, clay matrix, siliceous cement, friable, crumbles and loose in part, cross bedded, 10-16% intergranular porosity, brown oil stain, strong hydrocarbon odor, bleeding gas and oil on fracture faces, light yellow oil fluorescence, yellow gold milky cut fluorescence, yellow gold residual ring cut.
- 6833.7 SANDSTONE-dark brown, white, clear, quartzose, fine(lower) to fine(upper) grained, subangular, fair to poor sorted, clay matrix, siliceous cement, friable, crumbles and loose in part, cross bedded, 10-16% intergranular porosity, brown oil stain, strong hydrocarbon odor, bleeding gas and oil on fracture faces, light yellow oil fluorescence, yellow gold milky cut fluorescence, yellow gold residual ring cut.

WOLVERINE GAS & OIL CORPORATION

**WOLVERINE FEDERAL#17-3
NW/SW SEC.17.T23S,R1W
SEVIER CO., UTAH**

GEOLOGIC REPORT

ON

**WOLVERINE FEDERAL #17-3
NW/SW SEC.17,T23S,R1S
SEVIER CO., UTAH**

FOR

**WOLVERINE GAS & OIL CORPORATION
ONE RIVER FRONT PLAZA
55 CAMPAU NW
GRAND RAPIDS, MI 49503-2616**

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January 2005

**Roger D. Charbonneau, B.Sc
Wellsite Geologist**

WELL DATA SUMMARY

WELL NAME	WOLVERINE FEDERAL #17-3
OPERATOR	WOLVERINE GAS & OIL CORP.
SURFACE LOCATION	NW/SW SEC. 17,T23S,R1W SEVIER CO., UTAH
API#	043-041-30036
WELL CLASIFACATION	DEVELOPMENT COVENENT FIELD
DRILLING CONTRACTOR	UNIT #111
WELL LICENCE	043-041-30036
ELEVATION-GROUND LEVEL KELLY BUSHING	5736' 5753'
SPUD DATE	12-10-04
SURFACE CASING	615' OF 16"
INTERMEDIATE CASING	5810' OF 9 5/8"
PRODUCTION CASING	7050' OF 5 1/2"
HOLE SIZE	17 1/2, 12 1/4, 8 1/2
SAMPLE INTERVAL	1160-7150
GAS DETECTION	2044-7150
OPEN HOLE LOGS	GR,CAL,S-P,DLL,MICRO- LOG,BHCS,DIP METER
MUD TYPE	SATURATED SALT MUD
WELL STATUS	AWAITING COMPLETION

FORMATION TOPS

Kelly Bushing 5753'

Formation	Prog.(tvd)	Spl.Top(md)	Spl.Top(tvd)	Log Top(md)	Log Top(tvd)	Sub Sea
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Arapien	Surface					
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Twin Creek	5454	6117	5607	6165	5605	+148
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Navajo	5820	6501	5977	6499	5974	-221
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FORMATION EVALUATION

WOLVERINE GAS & OIL CORPORATION WOLVERINE FEDEREL #17-3 NW/SW SEC. 17,T23S,R1W SEVIER COUNTY, UTAH

The Wolverine Federal #14-3 was the third well drilled in the Covenant Field. Decollement Consulting began sample coverage at 1160' on Unit Rig #111, Dec. 14, 2004. Crews collected 30' lagged samples to total depth. Surface casing (13 3/8") was set to 615' and 12 1/4" drilled to 5828'. Intermediate casing (9 5/8") was set at 5810' and production casing (5 1/2") was set to 7050'. Six Cores were cut over the Navajo Sandstone. A full suite of logs were run including the Dip Meter. Gas detection was run from 2044 to 7150'

NAVAJO SANDSTONE 5974 TVD LOG

The Navajo Sandstone was white, clean, light brown, light red orange, quartzose, fine grained (lower) to medium (upper) grained, sub angular to rounded, fair to poor sorted, anhydrite and clay matrix, siliceous and calcareous cement, friable, 12-14% inter granular porosity, 75-100% unconsolidated, strong hydrocarbon odor, brown oil stain, rainbows on wash water, yellow white oil fluorescence, blue white milky cut fluorescence, yellow gold residual ring. There was over 400' of oil saturated reservoir.

CONCLUSION: Oil saturated reservoir-Awaiting Completion.

BIT RECORD

WELL NAME
#17-3

WOLVERINE FEDERAL

LOCATION

NW/SW SEC.17,T23SR1W

SURFACE CASING

616' OF 16"

SPUD DATE

12-10-04

TD DATE

1-17-04

BIT	1	2	3	4	5
SIZE	17.5	12 ¼	12 ¼	12 ¼	12 1/4
MAKE	STC	DPI	DPI	HTC	SEC
TYPE	Surface	MP54B2	MP45	retip	EBXS125
SERIAL#	MJ3820	2016038	2015727	retip	10683359
JETS	3X24	6X16	6X16	3X18	3X18
OUT@	608	3654	3724	3852	5577
FOOTAGE	598	3046	198	128	1722
HOURS	16 ½	90	11	4	143 1/2
ACC.HOURS	16 ½	106 ½	117 ½	121 ½	265
WT	25	20	20	14	37
RPM	40	55	50	60	40
PP	120	1900	1980	1800	1800
MUD WT	Water	9.5	9.9	9.7	9.8
VIS		33	36	49	51
BIT	6	7	8	9	10
SIZE	12 ¼	12 ¼	8 ½	8 ¼	8 1/4
MAKE	SEC		SEC	DPI	DPI
TYPE	EBXS125		EBXS20S	401	401
SERIAL#	10683357	XLX-C1	10550452	1962036	1962490
JETS	3X24		3X16	OPEN	OPEN
OUT@	5828		6619	6644	6666
FOOTAGE	249	ream&wash	791	25	22
HOURS	17		35 ½	11	14
ACC. HOURS	282		317 ½	328 ½	342 1/2
WT	38		45	20	25
RPM	35		40	70	70
PP	1790		1200	1060	1000
MUD WT	9.8		10.0	10.0	10.1
VIS	51		40	37	38

BIT RECORD CONTINUED

BIT	11	12	13	14RR
SIZE	8 ¼	8 ½	8 ½	8 1/2
MAKE	DPI	DPI	DPI	SEC
TYPE	301	CNR77FD	301	EBXS205
SERIAL#	1963121	2016628	1963121	10550452
JETS	OPEN	6X17	OPEN	6X17
OUT@	6689	6739	6817	7150
FOOTAGE	23	79	37	396
HOURS	10 ½	12	7 ½	10 1/2
ACC. HOURS	353	365	372 ½	393
WT	17	21	20	35
RPM	55	70	65	40
PP	1000	1020	1230	1440
MUD WT	10.0	10.1	10.1	10.1
VIS	40	46	47	44

DAILY DRILLING SUMMARY

DATE	DEPTH	PROG.	HRS	MUD	VIS	WL	PH	ACTIVITY
12-10-04	559	449	14 ½	8.4	27	N/C	8.0	Spud,Drill Surface
12-11-04	608	59	2	8.5	39	48+	7.0	Drill&Set Surface
12-12-04	608	Nil	Nil	9.1	51	12	7.0	Wash&Ream Surf.Hole
12-13-04	608	Nil	Nil	9.1	33	20	9.0	Cement Surf. Nipple Up
12-14-04	1189	581	10 ½	9.1	33	20	9.0	Pick up MWD,Drill Out
12-15-04	2079	890	23 ½	9.2	35	16	8.5	Drill
12-16-04	2663	584	18 ½	9.0	34	n/c	9.5	Drill.Wiper Trip,Drill
12-17-04	3429	766	23 ½	9.8	38	44	10.5	Drill
12-18-04	3654	225	13	9.8	34	44	10.5	Drill,Trip-Mud Motor
12-19-04	3852	198	11	9.8+	33	46	10.5	Drill,Motor Twist-off
12-20-04	3852	Nil	Nil	9.9	33	45	10.2	Fishing
12-21-04	3852	Nil	Nil	10.1	36	46	9.0	Fishing
12-22-04	3852	Nil	Nil	10.1	35	42	8.0	Fishing
12-23-04	3875	23	2	10.1	35	42	7.5	Fishing,Drill
12-24-04	3975	100	11 ½	10.0	35	36	9.5	Trip-Motor,Drill
12-25-04	4147	172	19	10.2+	39	36	10.5	Drill CO-MWD
12-26-04	4270	123	11	10.3	40	19.6	7.5	Drill,Trip-MWD
12-27-04	4529	259	17 ½	10.3	47	19.2	9.5	Drill
12-28-04	4896	367	23 ½	10.4	49	22.4	10.5	Drill
12-29-04	5079	183	17 ½	10.3	45	28.6	10.0	Drill,Wiper Trip
12-30-04	5390	300	23 ½	10.0+	50	29.8	11.0	Drill
12-31-04	5579	189	15	10.2	48	24.8	8.5	Drill,Trip-Bit
1-1-05	5775	196	12	10.2	48	26	8.5	RIH,Drill
1-2-05	5828	53	4	10.1	49	28	8.3	Drill,Trip-Casing
1-3-05	5828	Nil	Nil	10.1	50	29.8	10.0	Back Ream
1-4-05	5828	Nil	Nil	10.1	44	32	10.5	Back Ream
1-5-05	5828	Nil	Nil	10.3	45	33	8.5	Cond. Mud&Hole
1-6-05	5828	Nil	Nil	10.2	46	32	8.5	Run 9 5/8",Cement
1-7-05	5828	Nil	Nil	10.2	45	32	8.5	Nipple Up
1-8-05	6300	472	18 ½	10.2+	32	34	10.0	RIH,Drill
1-9-05	6619	319	17	10.1+	40	14.4	8.5	Drill,POOH,Core#1
1-10-05	6643	24	11	10.1	41	12.0	10.0	Cutting Core#1,POOH
1-11-05	6666	23	13 ½	10.1+	36	14.8	10.8	Lay down 1,RIH,Cut2
1-12-05	6687	21	11	10.0	39	12	11.0	Lay down2,RIH,Cut3
1-13-05	6739	52	5	10.2	38	13.6	11.0	Lay down3,Drill 50'
1-14-05	6797	58	8	10.3+	39	8.0	9.2	RIH,Cut4,Lay down4
1-15-05	6852	55	11 ½	10.1+	39	11.2	10.0	Cut5,Lay down5,RIH
1-16-05	6961	109	5	10.1	40	8.0	9.5	Cut6,Lay down6,Drill
1-17-05	7150	189	5 ½	10.3	41	10.2	9.0	Drill,POOH-Logs
1-18-05	7150	Nil	Nil	10.2	39	12.6	8.5	Logs Stuck in hole
1-19-05	7150	Nil	Nil	10.2	55	10.4	8.0	Fish Logging Tools

DAILY DRILLING SUMMARY CONTINUED

1-20-05	7150	Nil	Nil	10.2	46	16	10.8	Rec.7'9"Lay down
1-21-05	7150	Nil	Nil	10.2+	47	12	10.5	Fish Logging Tools
1-22-05	7150	Nil	Nil	10.2	66	10.0	8.8	Rec.33'9" of tool
1-23-05	7150	Nil	Nil	10.2	50	16	10.8	Logging

DEVIATION SURVEYS

Depth	Inclination	Direction
1011	6.2	236.20
1103	6.0	228.30
1195	6.7	227.10
1286	8.4	228.10
1379	9.2	227.60
1470	11.00	228.30
1561	12.80	228.60
1653	14.20	227.10
1745	15.60	224.90
1838	16.60	228.60
1928	18.00	228.50
2021	18.70	230.60
2083	20.10	230.70
2144	21.60	229.30
2206	23.10	227.20
2268	24.80	226.70
2329	26.90	226.90
2391	28.80	225.10
2483	31.10	224.50
2575	31.70	224.40
2667	31.90	225.50
2758	32.40	225.50
2850	32.50	227.60
2942	33.2	226.70
3035	32.70	224.60
3126	32.00	223.40
3219	33.20	221.90
3311	33.00	221.40
3402	33.80	221.60
3464	33.60	222.50
3586	29.90	225.10
3647	30.30	226.40
3708	30.20	225.10
3770	30.70	224.40
3839	29.50	221.80
3901	28.60	222.80
3962	28.80	222.70
4045	27.30	225.10
4136	26.10	224.60
4228	25.60	224.60

DEVIATION SURVEYS CONTINUED

4320	25.20	224.10
4412	25.10	223.20
4474	25.90	223.20
4535	26.70	221.40
4597	27.50	218.30
4658	28.20	216.00
4719	28.4	214.80
4770	28.40	215.40
2441	29.30	215.80
4902	29.80	217.00
4963	29.70	218.80
5024	29.70	220.70
5086	28.20	221.90
5147	27.40	224.80
5208	27.20	225.10
5269	26.10	223.90
5331	26.00	223.90
5391	25.30	225.60
5453	24.20	226.50
5515	23.80	225.60
5576	23.90	224.60
5637	23.40	224.20
5699	22.70	225.10
5773	22.70	227.40
5851	22.00	229.70
5942	21.00	231.10
6035	20.90	230.00
6126	20.40	229.70
6218	18.90	229.00
6309	14.90	227.20
6400	14.80	222.80
6493	14.80	219.70
6567	15.90	219.70
6619	16.67	219.70

CORE DESCRIPTIONS

**Wolverine Gas & Oil Corporation
Wolverine Federal #17-3
NW/SW Sec. 17,T23S,R1W
Sevier Co., Utah**

Core #1	6619-6644	Cut 25'	Recovered 25'
6619-22	SANDSTONE-light brown, clear, quartzose, very fine(upper) to course(lower) grained, sub angular, fair to poor sorted, clay matrix, calcareous cement, friable, massive, inter dune deposit, 6-10% intergranular porosity, hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.		
6622-25	SANDSTONE-light brown, clear, quartzose, very fine(upper) to medium(upper) grained, sub angular, fair to poor sorted, clay matrix, calcareous cement, friable, massive, inter dune deposit, 6-10% intergranular porosity, hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.		
6625-28	SANDSTONE-light brown, clear, quartzose, very fine(upper) to medium(lower) grained, sub angular, fair to poor sorted, clay matrix, calcareous cement, friable, massive, inter dune deposit, 6-10% intergranular porosity, hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.		
6628-31	SANDSTONE-light brown, clear, quartzose, very fine(upper) to medium(upper) grained, predominately very fine to fine grained, sub angular, fair to poor sorted, clay matrix, calcareous cement, friable, massive, inter dune deposit, 6-10% intergranular porosity, hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.		
6631-34	SANDSTONE-light brown, clear, quartzose, very fine(upper) to medium(upper) grained, predominately very fine to fine grained, sub angular, fair to poor sorted, clay matrix, calcareous cement, friable, massive, inter dune deposit, plant root lets, 6-10% intergranular porosity, hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.		

- 6634-37 SANDSTONE-light brown, clear, quartzose, fine(lower) to medium(upper) grained, predominately very fine to fine grained, sub angular, fair to poor sorted, clay matrix, calcareous cement, friable, massive, inter dune deposit, mottled with white anhydrite, no oil stain when anhydrite present, 6-10% intergranular porosity, hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.
- 6637-40 SANDSTONE-light brown, clear, quartzose, fine(lower) to coarse(lower) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, live brown oil on sepersation surface, 10-14% intergranular porosity, hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.
- 6640-43 SANDSTONE-light brown, clear, quartzose, fine(lower) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded(35deg), poker chipped in part, 10-14% intergranular porosity, hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.
- 6644 SANDSTONE-light brown, clear, quartzose, fine(upper) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded(35deg), poker chipped in part, 10-14% intergranular porosity, hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.
- Core #2 6644-6666 Cut 22' Recovered 22'
- 6644-47 SANDSTONE-light brown, clear, quartzose, very fine(upper) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bed laminations(35deg), poker chipped in part, rubblized in part, banded with silica fracture fill, hard and tight streaks, mottled and spotty oil stain, hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.

- 6647-50 SANDSTONE-light brown, clear, quartzose, very fine(upper) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, 8-10% intergranular porosity, cross bed laminations(35deg), poker chipped in part, rubblized in part, even oil stain, strong hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.
- 6650-53 SANDSTONE-light brown, clear, quartzose, very fine(upper) to medium (upper) grained, predominately very fine to fine grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, 8-10% intergranular porosity, cross bed laminations(35deg), 50-60 degree fracture planes, poker chipped in part, rubblized in part, even oil stain, strong hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.
- 6653-56 SANDSTONE-light brown, clear, quartzose, fine(upper) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, 10-14% intergranular porosity, cross bed laminations(35deg), 50-60 degree fracture planes, poker chipped in part, rubblized in part, gas and oil bubbling from pores, scattered quartz fracture fill, even oil stain, strong hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.
- 6656-59 SANDSTONE-light brown, clear, quartzose, fine(upper) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, 10-14% intergranular porosity, cross bed laminations(35deg), 50-60 degree fracture planes, slabed in part, rubblized in part, gas and oil on fracture faces, scattered quartz fracture fill, even oil stain, strong hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.
- 6659-62 SANDSTONE-light brown, clear, quartzose, fine(upper) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, 10-14% intergranular porosity, cross bed laminations(35deg), 50-60 degree fracture planes, slabed in part, rubblized in part, gas and oil on fracture faces, scattered quartz fracture fill, even oil stain, strong hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.

- 6662-65 SANDSTONE-light brown, clear, quartzose, very fine(upper) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, 10-14% intergranular porosity, cross bed laminations(35deg), 50-60 degree fracture planes, slabled in part, rubblized in part, gas and oil on fracture faces, scattered quartz fracture fill, even oil stain, strong hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.
- 6666 SANDSTONE-light brown, white, clear, quartzose, very fine(upper) to fine (upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, tight, rubblized in part, quartz fracture fill, even oil stain, strong hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.
- Core #3 6666-89 Cut 23' Recovered 22'
- 6666-69 SANDSTONE-light brown, white, clear, quartzose, very fine(upper) to medium (lower) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, tight, rubblized in part, quartz fracture fill, mottled oil stain, strong hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.
- 6669-72 SANDSTONE-light brown, white, clear, quartzose, very fine(upper) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, tight, rubblized in part, quartz fracture fill, even oil stain, strong hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.
- 6672-75 SANDSTONE-light brown, white, clear, quartzose, fine(upper) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, rubblized in part, 10-14% intergranular porosity, cross bedded, even oil stain, strong hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.
- 6675-78 SANDSTONE-light brown, white, clear, quartzose, fine(upper) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, rubblized in part, 10-14% intergranular porosity, cross bedded, even oil stain, strong hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.

- 6678-81 SANDSTONE-light brown, white, clear, quartzose, fine(upper) to medium (upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, rubblized in part, 8-10% intergranular porosity, cross bedded, tight in mottled zone, mottled oil stain in part, strong hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.
- 6681-84 SANDSTONE-light brown, white, clear, quartzose, fine(upper) to medium (lower) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, rubblized in part, 8-12% intergranular porosity, cross bedded, tight in mottled zone, mottled oil stain in part, strong hydrocarbon odor, yellow oil fluorescence, light brown oil stain, yellow to white milky cut fluorescence, yellow to gold residual ring cut.
- 6684-87 SANDSTONE-light brown, white, clear, quartzose, very fine(lower) to very fine (upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, tight, clay filled, mottled stain, weak show, thin residual ring.
- 6687-89 SANDSTONE-light brown, white, clear, quartzose, very fine(lower) to very fine (upper) grained, sub angular, fair to poor sorted, clay matrix, dolomite cement, tight, clay filled, no stain, weak to no show.
- Core #4 6739-97 Cut 58' Recovered 58'
- 6739 SILTSTONE-red brown, silty, sandy, argillaceous, dolomitic, hard, tight, massive, weak-no show, 60 degree fractures filled with white calcite, minor wavy to inclined depositional laminations.
- 6742 SILTSTONE-red brown, silty, sandy, argillaceous, dolomitic, hard, tight, massive, weak-no show, 60 degree fractures filled with white calcite, minor wavy to inclined depositional laminations.
- 6745 SILTSTONE-red brown, silty, sandy, scattered very fine (lower) sand, argillaceous, dolomitic, hard, tight, massive, weak-no show, 60 degree fractures filled with white calcite, minor wavy to inclined depositional laminations.
- 6748 SILTSTONE-light red orange, red brown, silty, sandy, scattered very fine (lower) sand, argillaceous, dolomitic, hard, tight, massive, weak-no show, 60 degree fractures filled with white calcite, minor wavy to inclined depositional laminations.

- 6751 SILTSTONE-light red orange, red brown, silty, sandy, scattered very fine (lower) sand, argillaceous, dolomitic, hard, tight, massive, weak-no show, 60 degree fractures filled with white calcite, minor wavy to inclined depositional laminations.
- 6754 SHALE-medium to dark red brown, silty, arenaceous, dolomitic, massive, hard, scattered wavy to inclined depositional laminations.
- 6757 SHALE-medium to dark red brown, silty, arenaceous, dolomitic, massive, hard, scattered wavy to inclined depositional laminations.
- 6758 SHALE-medium to dark red brown, silty, arenaceous, dolomitic, massive, hard, scattered wavy to inclined depositional laminations, 15 degree contact surface with under laying sandstone, abundant slickensides at contact.
- 6760 SANDSTONE-white, light gray, clear, quartzose, very fine(lower) to very fine(upper) grained, clay matrix, dolomitic cement, firm to hard, tight, no to weak show, massive.
- 6763 SANDSTONE-white, light gray, clear, quartzose, very fine(lower) to very fine(upper) grained, clay matrix, dolomitic cement, firm to hard, tight, no to weak show, massive.
- 6766 SANDSTONE-pink, white, becoming light brown, clear, quartzose, very fine(lower) to fine(lower) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, even light yellow oil fluorescence, light brown oil stain, yellow to gold milky cut fluorescence, yellow gold residual ring cut, 10-12% intergranular porosity.
- 6769 SANDSTONE-pink, white, becoming light brown, clear, quartzose, very fine(lower) to fine(upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, even light yellow oil fluorescence, light brown oil stain, yellow to gold milky cut fluorescence, yellow gold residual ring cut, 10-12% intergranular porosity.
- 6772 SANDSTONE-light brown, clear, quartzose, very fine(upper) to medium(lower) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, even light yellow oil fluorescence, brown oil stain, yellow to gold milky cut fluorescence, yellow gold residual ring cut, 10-14% intergranular porosity, strong hydrocarbon odor, bleeding oil and gas.

- 6775 SANDSTONE-light brown, clear, quartzose, fine(lower) to medium(upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, even light yellow oil fluorescence, brown oil stain, yellow to gold milky cut fluorescence, yellow gold residual ring cut, 10-14% intergranular porosity, strong hydrocarbon odor, bleeding gas and oil.
- 6778 SANDSTONE-light brown, clear, quartzose, fine(lower) to medium(upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, even light yellow oil fluorescence, brown oil stain, yellow to gold milky cut fluorescence, yellow gold residual ring cut, 10-14% intergranular porosity, strong hydrocarbon odor, bleeding gas and oil.
- 6781 SANDSTONE-light brown, tan, clear, quartzose, fine(lower) to medium(upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, even light yellow oil fluorescence, brown oil stain, yellow to gold milky cut fluorescence, yellow gold residual ring cut, 10-14% intergranular porosity, strong hydrocarbon odor, bleeding gas and oil.
- 6784 SANDSTONE-light brown, tan, clear, quartzose, very fine(upper) to medium(lower) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, even light yellow oil fluorescence, brown oil stain, yellow to gold milky cut fluorescence, yellow gold residual ring cut, 10-14% intergranular porosity, strong hydrocarbon odor, bleeding gas and oil.
- 6787 SANDSTONE-light brown, tan, clear, quartzose, very fine(upper) to fine(upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, even light yellow oil fluorescence, brown oil stain, yellow to gold milky cut fluorescence, yellow gold residual ring cut, 10-14% intergranular porosity, strong hydrocarbon odor, bleeding gas and oil.
- 6790 SANDSTONE-light brown, tan, clear, quartzose, fine(lower) to fine(upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, even light yellow oil fluorescence, brown oil stain, yellow to gold milky cut fluorescence, yellow gold residual ring cut, 10-14% intergranular porosity, strong hydrocarbon odor, bleeding gas and oil.

- 6793 SANDSTONE-dark brown, clear, quartzose, fine(lower) to medium(upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, even light yellow oil fluorescence, brown oil stain, yellow to gold milky cut fluorescence, yellow gold residual ring cut, 10-14% intergranular porosity, strong hydrocarbon odor, bleeding gas and oil.
- 6796 SANDSTONE-dark brown, clear, quartzose, fine(lower) to medium(upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, even light yellow oil fluorescence, brown oil stain, yellow to gold milky cut fluorescence, yellow gold residual ring cut, 10-14% intergranular porosity, strong hydrocarbon odor, bleeding gas and oil.
- 6797 SANDSTONE-dark brown, clear, quartzose, fine(lower) to medium(upper) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, even light yellow oil fluorescence, brown oil stain, yellow to gold milky cut fluorescence, yellow gold residual ring cut, 10-14% intergranular porosity, strong hydrocarbon odor, bleeding gas and oil.
- Core #5 6797-6817 Cut 20' Recovered 18.5'
- 6800 SANDSTONE-dark brown, clear, quartzose, fine(lower) to medium(lower) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, 10-16% intergranular porosity, brown oil stain, strong hydrocarbon odor, bleeding oil and gas, even yellow oil fluorescence, yellow gold milky cut fluorescence, yellow gold residual ring.
- 6803 SANDSTONE-dark brown, clear, quartzose, fine(lower) to medium(lower) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, 10-16% intergranular porosity, brown oil stain, strong hydrocarbon odor, bleeding oil and gas, even yellow oil fluorescence, yellow gold milky cut fluorescence, yellow gold residual ring.
- 6806 SANDSTONE-dark brown, clear, quartzose, fine(lower) to medium(lower) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, 10-16% intergranular porosity, brown oil stain, strong hydrocarbon odor, bleeding oil and gas, even yellow oil fluorescence, yellow gold milky cut fluorescence, yellow gold residual ring.

- 6809 SANDSTONE-dark brown, clear, quartzose, fine(lower) to medium(lower) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, 10-16% intergranular porosity, brown oil stain, strong hydrocarbon odor, bleeding oil and gas, even yellow oil fluorescence, yellow gold milky cut fluorescence, yellow gold residual ring.
- 6812 SANDSTONE-dark brown, clear, quartzose, fine(lower) to medium(lower) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, 10-16% intergranular porosity, brown oil stain, strong hydrocarbon odor, bleeding oil and gas, even yellow oil fluorescence, yellow gold milky cut fluorescence, yellow gold residual ring.
- 6814.5 SANDSTONE-dark brown, clear, quartzose, fine(lower) to medium(lower) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, 10-16% intergranular porosity, brown oil stain, strong hydrocarbon odor, bleeding oil and gas, even yellow oil fluorescence, yellow gold milky cut fluorescence, yellow gold residual ring.
- 6815.5 SANDSTONE-dark brown, clear, quartzose, fine(lower) to medium(lower) grained, sub angular, fair to poor sorted, clay matrix, siliceous cement, friable, cross bedded, 10-16% intergranular porosity, brown oil stain, strong hydrocarbon odor, bleeding oil and gas, even yellow oil fluorescence, yellow gold milky cut fluorescence, yellow gold residual ring.
- Core #6 6817-52 Cut 35' Recovered 16.7'
- 6817 SANDSTONE-dark brown, white, clear, quartzose, very fine(upper) to medium(lower) grained, subangular, fair to poor sorted, clay matrix, siliceous cement, friable, crumbles and loose in part, cross bedded, 10-16% intergranular porosity, brown oil stain, strong hydrocarbon odor, bleeding gas and oil on fracture faces, light yellow oil fluorescence, yellow gold milky cut fluorescence, yellow gold residual ring cut.
- 6820 SANDSTONE-light brown, white, clear, quartzose, very fine(upper) to medium(lower) grained, subangular, fair to poor sorted, clay matrix, siliceous cement, friable, crumbles and loose in part, cross bedded, 10-16% intergranular porosity, brown oil stain, strong hydrocarbon odor, bleeding gas and oil on fracture faces, light yellow oil fluorescence, yellow gold milky cut fluorescence, yellow gold residual ring cut.

- 6823 SANDSTONE-dark brown, white, clear, quartzose, very fine(upper) to medium(lower) grained, subangular, fair to poor sorted, clay matrix, siliceous cement, friable, crumbles and loose in part, cross bedded, 10-16% intergranular porosity, brown oil stain, strong hydrocarbon odor, bleeding gas and oil on fracture faces, light yellow oil fluorescence, yellow gold milky cut fluorescence, yellow gold residual ring cut.
- 6826 SANDSTONE-light brown, white, clear, quartzose, fine(upper) to medium(upper) grained, subangular, fair to poor sorted, clay matrix, siliceous cement, friable, crumbles and loose in part, cross bedded, 10-16% intergranular porosity, brown oil stain, strong hydrocarbon odor, bleeding gas and oil on fracture faces, light yellow oil fluorescence, yellow gold milky cut fluorescence, yellow gold residual ring cut.
- 6829 SANDSTONE-dark brown, white, clear, quartzose, fine(lower) to medium(lower) grained, subangular, fair to poor sorted, clay matrix, siliceous cement, friable, crumbles and loose in part, cross bedded, 10-16% intergranular porosity, brown oil stain, strong hydrocarbon odor, bleeding gas and oil on fracture faces, light yellow oil fluorescence, yellow gold milky cut fluorescence, yellow gold residual ring cut.
- 6832 SANDSTONE-dark brown, white, clear, quartzose, fine(lower) to medium(lower) grained, subangular, fair to poor sorted, clay matrix, siliceous cement, friable, crumbles and loose in part, cross bedded, 10-16% intergranular porosity, brown oil stain, strong hydrocarbon odor, bleeding gas and oil on fracture faces, light yellow oil fluorescence, yellow gold milky cut fluorescence, yellow gold residual ring cut.
- 6833.7 SANDSTONE-dark brown, white, clear, quartzose, fine(lower) to fine(upper) grained, subangular, fair to poor sorted, clay matrix, siliceous cement, friable, crumbles and loose in part, cross bedded, 10-16% intergranular porosity, brown oil stain, strong hydrocarbon odor, bleeding gas and oil on fracture faces, light yellow oil fluorescence, yellow gold milky cut fluorescence, yellow gold residual ring cut.

SAMPLE DESCRIPTIONS

**Wolverine Gas & Oil Corporation
Wolverine Federal #17-3
NW/SW Sec.,17.T23S,R1W
Sevier Co., Utah**

- 1160-90 SHALE-30% light gray, light gray brown, blocky, slightly calcareous, firm.
 Limestone-30% light gray brown, silty, lithographic, argillaceous, mudstone.
 ANHYDRITE-10% white, crystalline, chalky.
 SILTSTONE-30% light gray, calcareous, argillaceous, anhydritic, firm.
- 1190-1220 SHALE-50% light gray, light gray brown, blocky, slightly calcareous, firm.
 Limestone-20% light gray brown, silty, lithographic, argillaceous, mudstone.
 ANHYDRITE-10% white, crystalline, chalky.
 SILTSTONE-20% light gray, calcareous, argillaceous, anhydritic, firm.
- 1220-50 SHALE-30% light gray, light gray brown, blocky, slightly calcareous, firm.
 Limestone-20% light gray brown, silty, lithographic, argillaceous, mudstone.
 ANHYDRITE-30% white, crystalline, chalky.
 SILTSTONE-20% light gray, calcareous, argillaceous, anhydritic, firm.
- 1250-80 SHALE-30% light gray, light gray brown, blocky, slightly calcareous, firm.
 Limestone-40% light gray brown, silty, lithographic, argillaceous, mudstone.
 ANHYDRITE-20% white, crystalline, chalky.
 SILTSTONE-10% light gray, calcareous, argillaceous, anhydritic, firm.
- 1280-1310 SHALE-20% light gray, light gray brown, blocky, slightly calcareous, firm.
 Limestone-50% light gray brown, silty, lithographic, argillaceous, mudstone.
 ANHYDRITE-20% white, crystalline, chalky.
 SILTSTONE-10% light gray, calcareous, argillaceous, anhydritic, firm.

- 1310-40 SHALE-20% light gray, light gray brown, blocky, slightly calcareous, firm.
LIMESTONE-50% light gray brown, silty, lithographic, argillaceous, mudstone.
ANHYDRITE-20% white, crystalline, chalky.
SILTSTONE-10% light gray, calcareous, argillaceous, anhydritic, firm.
- 1340-70 SHALE-10% light gray, light gray brown, blocky, slightly calcareous, firm.
LIMESTONE-40% light gray brown, silty, lithographic, argillaceous, mudstone.
ANHYDRITE-30% white, crystalline, chalky.
SILTSTONE-20% light gray, calcareous, argillaceous, anhydritic, firm.
- 1370-1400 SHALE-70% light gray, light gray brown, limy, silty, sandy, earthy, blocky, slightly calcareous, firm.
LIMESTONE-10% light gray brown, silty, lithographic, argillaceous, mudstone.
ANHYDRITE-10% white, crystalline, chalky.
SILTSTONE-10% light gray, calcareous, argillaceous, arenaceous, anhydritic, blocky, firm.
- 1400-30 SHALE-70% light gray, light gray brown, limy, silty, sandy, earthy, blocky, slightly calcareous, firm.
LIMESTONE-trace% light gray brown, silty, lithographic, argillaceous, mudstone.
ANHYDRITE-10% white, crystalline, chalky.
SILTSTONE-20% light gray, calcareous, argillaceous, arenaceous, anhydritic, blocky, firm.
- 1430-60 SHALE-80% light gray, white, limy, silty, sandy, earthy, blocky, slightly calcareous, firm.
ANHYDRITE-20% white, crystalline, chalky.
- 1460-90 SHALE-70% light gray, green, limy, marly, earthy, blocky, slightly calcareous, firm.
ANHYDRITE-30% white, crystalline, chalky.
- 1490-1520 SHALE-60% light gray, green, limy, marly, earthy, blocky, slightly calcareous, firm.
ANHYDRITE-40% white, crystalline, chalky.

- 1520-50 SHALE-70% light gray, limy, marly, earthy, blocky, silty, firm.
ANHYDRITE-30% white, crystalline, chalky.
- 1550-80 No Sample
- 1580-1610 No Sample
- 1610-40 SHALE-80% light gray, light gray green, silty, slightly calcareous, marly.
ANHYDRITE-20% white, crystalline, chalky.
- 1640-70 SHALE-80% light gray, light gray green, silty, slightly calcareous, marly.
ANHYDRITE-20% white, crystalline, chalky.
LIMESTONE-80% light gray brown, earthy, argillaceous, lithographic, mudstone.
- 1670-1700 SHALE-50% red brown, silty, limy, earthy, mottled with anhydrite in part, slightly calcareous, marly.
ANHYDRITE-10% white, crystalline, chalky.
LIMESTONE-40% light gray brown, earthy, argillaceous, lithographic, mudstone.
- 1700-30 SHALE-60% red brown, silty, limy, earthy, mottled with anhydrite in part, slightly calcareous, marly.
ANHYDRITE-20% white, crystalline, chalky.
LIMESTONE-20% light gray brown, earthy, argillaceous, lithographic, mudstone.
- 1730-60 SHALE-70% red brown, silty, limy, earthy, mottled with anhydrite in part, slightly calcareous, marly.
ANHYDRITE-10% white, crystalline, chalky.
SILTSTONE-20% white, argillaceous, calcareous, gypsiferous.
- 1760-90 SHALE-20% red brown, brick red, silty & sandy, limy, earthy, mottled with anhydrite in part, slightly calcareous, marly.
ANHYDRITE-10% white, crystalline, chalky.
SILTSTONE-trace% white, argillaceous, calcareous, gypsiferous.
LIMESTONE-10% light gray brown, earthy, argillaceous, lithographic, mudstone.
- 1790-1820 SHALE-80% red brown, silty, limy, earthy, mottled with anhydrite in part, slightly calcareous, marly.
ANHYDRITE-20% white, crystalline, chalky.

- 1820-50 SHALE-20% red brown, silty, blocky, firm, calcareous.
 ANHYDRITE-10% white, crystalline, chalky.
 LIMESTONE-70% light gray, earthy, argillaceous, lithographic, mudstone.
- 1850-80 SHALE-20% red brown, silty, blocky, firm, calcareous.
 ANHYDRITE-10% white, crystalline, chalky.
 LIMESTONE-70% light gray, earthy, argillaceous, lithographic, mudstone.
- 1880-1910 SHALE-30% red brown, silty, blocky, soft to firm, calcareous.
 LIMESTONE-10% light gray, earthy, argillaceous, lithographic, mudstone.
 MARLSTONE-60% white, cream, chalky, soft, silty, sandy in part.
- 1910-40 SHALE-10% red brown, silty, blocky, soft to firm, calcareous.
 LIMESTONE-30% light gray, earthy, argillaceous, lithographic, mudstone.
 MARLSTONE-30% white, cream, chalky, soft, silty, sandy in part.
 ANHYDRITE-30% white, crystalline, chalky.
- 1940-70 LIMESTONE-80% light gray, earthy, argillaceous, lithographic, mudstone.
 MARLSTONE-10% white, cream, chalky, soft, silty, sandy in part.
 ANHYDRITE-10% white, crystalline, chalky.
- 1970-2000 ANHYDRITE-10% white, crystalline, chalky.
 LIMESTONE-90% light gray, earthy, argillaceous, lithographic, mudstone.
- 2000-30 ANHYDRITE-10% white, crystalline, chalky.
 LIMESTONE-90% light gray, earthy, argillaceous, lithographic, mudstone.
- 2030-60 SHALE-90% light gray, blocky, earthy, grades to argillaceous limestone, soft to firm, calcareous.
 ANHYDRITE-10% white, crystalline, chalky.
- 2060-90 ANHYDRITE-10% white, crystalline, chalky.
 LIMESTONE-90% light gray, earthy, calcite fracture in fill, argillaceous, lithographic, mudstone.

2090-2120	LIMESTONE-100% light gray, earthy, calcite fracture in fill, argillaceous, lithographic, mudstone.
2120-50	LIMESTONE-100% light gray, earthy, calcite fracture in fill, argillaceous, lithographic, mudstone.
2150-80	LIMESTONE-100% light gray, earthy, calcite fracture in fill, argillaceous, lithographic, mudstone.
2180-2210	LIMESTONE-100% light gray, earthy, calcite fracture in fill, argillaceous, lithographic, mudstone.
2210-40	LIMESTONE-100% light gray, earthy, calcite fracture in fill, argillaceous, lithographic, mudstone.
2240-70	LIMESTONE-90% light gray, earthy, calcite fracture in fill, argillaceous, lithographic, mudstone. ANHYDRITE-10% white, chalky, crystalline, translucent, soft to firm.
2270-2300	SHALE-10% red brown, blocky, silty. LIMESTONE-90% light gray, earthy, calcite fracture in fill, argillaceous, lithographic, mudstone.
2300-30	LIMESTONE-100% light to medium gray, blocky, earthy, argillaceous, lithographic, mudstone.
2330-60	LIMESTONE-100% light to medium gray, blocky, earthy, argillaceous, lithographic, mudstone.
2360-90	LIMESTONE-100% light to medium gray, blocky, earthy, argillaceous, lithographic, mudstone.
2390-2420	LIMESTONE-100% light to medium gray, blocky, earthy, argillaceous, lithographic, mudstone.
2420-2450	LIMESTONE-100% light to medium gray, blocky, earthy, argillaceous, lithographic, mudstone.
2450-80	No Sample

- 2480-2510 LIMESTONE-90% light to medium gray, blocky, earthy, argillaceous, lithographic, mudstone.
ANHYDRITE-10% white, chalky, crystalline, translucent, soft to firm.
- 2510-40 LIMESTONE-100% light to medium gray, blocky, earthy, argillaceous, lithographic, mudstone.
- 2540-70 LIMESTONE-100% light to medium gray, blocky, earthy, argillaceous, lithographic, mudstone.
- 2570-2600 LIMESTONE-80% light to medium gray, blocky, earthy, argillaceous, lithographic, mudstone.
SILTSTONE-10% white, arenaceous, argillaceous, anhydritic.
SHALE-10% red brown, silty, blocky, firm.
- 2600-30 LIMESTONE-80% light to medium gray, blocky, earthy, argillaceous, lithographic, mudstone.
ANHYDRITE-20% white, silty, chalky, firm.
- 2630-60 LIMESTONE-80% light to medium gray, blocky, earthy, argillaceous, lithographic, mudstone.
ANHYDRITE-20% white, silty, chalky, firm.
- 2660-90 LIMESTONE-100% light to medium gray, blocky, earthy, argillaceous, lithographic, mudstone.
- 2690-2720 LIMESTONE-100% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
- 2720-50 LIMESTONE-100% light to medium gray, blocky, earthy, argillaceous, lithographic, mudstone.
- 2750-80 LIMESTONE-100% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
- 2780-2810 LIMESTONE-100% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
SILTSTONE-40% light gray, white, limy, arenaceous, argillaceous.
- 2810-40 LIMESTONE-100% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
SILTSTONE-40% light gray, white, limy, arenaceous, argillaceous.

- 2840-70 Limestone-100% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
Siltstone-40% light gray, white, limy, arenaceous, argillaceous.
- 2870-2900 Limestone-60% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
Siltstone-20% light gray, white, limy, arenaceous, argillaceous.
Shale-10% red brown, mottled, slightly calcareous, blocky, firm.
Anhydrite-10% white, soft, chalky.
- 2900-30 Limestone-60% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
Siltstone-20% light gray, white, limy, arenaceous, argillaceous.
Shale-10% red brown, mottled, slightly calcareous, blocky, firm.
Anhydrite-10% white, soft, chalky.
- 2930-60 Shale-10% red brown, mottled, slightly calcareous, blocky, firm.
Limestone-90% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
- 2960-90 Shale-10% red brown, mottled, slightly calcareous, blocky, firm.
Limestone-90% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
- 2990-3020 Limestone-100% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
- 3020-50 Shale-40% red brown, mottled, slightly calcareous, blocky, firm.
Limestone-60% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
- 3050-80 Shale-40% red brown, mottled, slightly calcareous, blocky, firm.
Limestone-60% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
- 3080-3110 Shale-60% red brown, mottled, slightly calcareous, blocky, firm.
Limestone-10% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
Siltstone-30% light gray, white, limy, arenaceous, argillaceous.
- 3110-40 Siltstone-10% light gray, white, brown, dirty, tight, limy, arenaceous, argillaceous.
Shale-90% red brown, red, light blue green, varied color, mottled, slightly calcareous, blocky, firm.

- 3140-70 SILTSTONE-30% light gray, white, brown, dirty, tight, limy, arenaceous, argillaceous.
SHALE-70% red brown, red, light blue green, varied color, mottled, slightly calcareous, blocky, firm.
- 3170-3200 SILTSTONE-10% light gray, white, brown, dirty, tight, limy, arenaceous, argillaceous.
SHALE-40% red brown, red, light blue green, varied color, mottled, slightly calcareous, blocky, firm.
LIMESTONE-50% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
- 3200-30 SILTSTONE-40% light gray, white, brown, dirty, tight, limy, arenaceous, argillaceous.
SHALE-50% red brown, red, light blue green, varied color, mottled, slightly calcareous, blocky, firm.
LIMESTONE-10% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
- 3230-60 SHALE-10% red brown, red, light blue green, varied color, mottled, slightly calcareous, blocky, firm.
LIMESTONE-90% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
- 3260-90 SILTSTONE-30% light gray, white, brown, dirty, tight, limy, arenaceous, argillaceous.
SHALE-30% red brown, red, light blue green, varied color, mottled, slightly calcareous, blocky, firm.
LIMESTONE-40% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
- 3290-3320 SILTSTONE-10% light gray, white, brown, dirty, tight, limy, arenaceous, argillaceous.
LIMESTONE-90% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
- 3320-50 SILTSTONE-10% light gray, white, brown, dirty, tight, limy, arenaceous, argillaceous.
SHALE-10% red brown, red, light blue green, varied color, mottled, slightly calcareous, blocky, firm.
LIMESTONE-80% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.

- 3350-80 SILTSTONE-10% light gray, white, brown, dirty, tight, limy, arenaceous, argillaceous.
 SHALE-10% red brown, red, light blue green, varied color, mottled, slightly calcareous, blocky, firm.
 LIMESTONE-80% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
- 3380-3410 SILTSTONE-30% light gray, white, brown, dirty, tight, limy, arenaceous, argillaceous.
 SHALE-10% red brown, red, light blue green, varied color, mottled, slightly calcareous, blocky, firm.
 LIMESTONE-60% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
- 3410-40 SILTSTONE-20% light gray, white, brown, dirty, tight, limy, arenaceous, argillaceous.
 SHALE-10% red brown, red, light blue green, varied color, mottled, slightly calcareous, blocky, firm.
 LIMESTONE-70% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
- 3440-70 LIMESTONE-100% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
- 3470-3500 LIMESTONE-100% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
- 3500-30 LIMESTONE-100% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
- 3530-60 LIMESTONE-100% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
- 3560-90 LIMESTONE-100% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
- 3590-3620 SHALE-30% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
 LIMESTONE-70% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.

- 3620-50 SHALE-10% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
LIMESTONE-60% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
SILTSTONE-30% light gray, white, brown, dirty, tight, limy, arenaceous, argillaceous.
- 3650-80 SHALE-30% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
LIMESTONE-60% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
SILTSTONE-10% light gray, white, brown, dirty, tight, limy, arenaceous, argillaceous.
- 3680-3710 SHALE-20% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
LIMESTONE-70% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
ANHYDRITE-10% white, sucrosic, chalky, soft.
- 3710-40 SHALE-20% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
LIMESTONE-70% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
ANHYDRITE-10% white, sucrosic, chalky, soft.
- 3740-70 SHALE-20% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
LIMESTONE-80% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
- 3770-3800 LIMESTONE-100% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
- 3800-30 LIMESTONE-100% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.

- 3830-60 SHALE-30% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
SILTSTONE-10% light gray, white, brown, dirty, tight, limy, arenaceous, argillaceous.
ANHYDRITE-10% white, sucrosic, chalky, soft.
LIMESTONE-50% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
- 3860-90 ANHYDRITE-10% white, sucrosic, chalky, soft.
LIMESTONE-60% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
SHALE-30% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
- 3890-3920 LIMESTONE-90% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
SHALE-10% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
- 3920-50 LIMESTONE-70% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
SHALE-20% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
SILTSTONE-10% light gray, white, brown, dirty, tight, limy, arenaceous, argillaceous.
- 3950-80 LIMESTONE-90% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
SHALE-10% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
- 3980-4010 LIMESTONE-90% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
SHALE-10% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
- 4010-40 LIMESTONE-90% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
SHALE-10% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.

- 4040-70 Limestone-90% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
Shale-10% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
- 4070-4100 Limestone-90% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
Shale-10% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
Anhydrite-10% white, sucrosic, crystalline.
- 4100-30 Limestone-90% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
Shale-10% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
- 4130-60 Limestone-90% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
Shale-10% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
- 4160-90 Limestone-90% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
Shale-10% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
- 4190-4220 Limestone-90% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
Shale-10% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
- 4220-50 Limestone-90% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
Shale-10% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
- 4250-80 Limestone-50% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
Shale-30% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
Siltstone-20% light gray, white, brown, dirty, tight, limy, arenaceous, argillaceous.

- 4280-4310 Limestone-90% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
Shale-10% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
- 4310-40 Limestone-100% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
- 4340-70 Limestone-100% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
- 4370-4400 Limestone-70% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
Shale-10% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
Siltstone-20% light gray, white, brown, dirty, tight, limy, arenaceous, argillaceous.
- 4400-30 Limestone-70% light to medium gray, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
Siltstone-30% light gray, white, brown, dirty, tight, limy, arenaceous, argillaceous.
- 4430-60 Limestone-100% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, lithographic, abundant white calcite fracture fill, mudstone.
- 4460-90 Limestone-100% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
- 4490-4520 Limestone-100% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
- 4520-50 Limestone-100% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
- 4550-80 Limestone-100% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.

- 4580-4610 LIMESTONE-100% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
- 4610-40 LIMESTONE-100% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
- 4640-70 LIMESTONE-100% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
- 4670-4700 LIMESTONE-100% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
- 4700-30 LIMESTONE-90% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
SHALE-10% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
- 4730-60 LIMESTONE-70% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
SHALE-10% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
SILTSTONE-20% light gray, white, brown, dirty, tight, limy, arenaceous, argillaceous.
- 4760-90 LIMESTONE-80% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
SHALE-10% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
SILTSTONE-10% light gray, white, brown, dirty, tight, limy, arenaceous, argillaceous.

- 4790-4820 Limestone-80% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
 SHALE-10% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
 SILTSTONE-10% light gray, white, brown, dirty, tight, limy, arenaceous, argillaceous.
- 4820-50 Limestone-50% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
 SHALE-30% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
 SILTSTONE-10% light gray, white, brown, dirty, tight, limy, arenaceous, argillaceous.
 ANHYDRITE-10% white, silty, chalky, soft.
- 4850-80 Limestone-40% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
 SHALE-30% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
 SILTSTONE-20% light gray, white, brown, dirty, tight, limy, arenaceous, argillaceous.
 ANHYDRITE-10% white, silty, chalky, soft.
- 4880-4910 Limestone-60% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
 SHALE-20% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
 SILTSTONE-20% light gray, white, brown, dirty, tight, limy, arenaceous, argillaceous.
- 4910-40 Limestone-90% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
 SHALE-10% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.

- 4940-70 LIMESTONE-90% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
SHALE-10% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
- 4970-5000 LIMESTONE-100% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
- 5000-30 LIMESTONE-100% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
- 5030-60 LIMESTONE-100% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
- 5060-90 LIMESTONE-70% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
SHALE-30% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
- 5090-5120 LIMESTONE-90% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
SHALE-10% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
- 5120-50 LIMESTONE-70% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
SHALE-30% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
- 5150-80 LIMESTONE-90% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
SHALE-10% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.

- 5180-5210 Limestone-100% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
- 5210-40 Limestone-100% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
- 5240-70 Limestone-100% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
- 5270-5300 Limestone-80% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
Shale-10% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
- 5300-30 Limestone-80% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
Shale-10% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
- 5330-60 Limestone-100% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
- 5360-90 Limestone-80% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
Shale-10% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
- 5390-5420 Limestone-100% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
- 5420-50 Limestone-100% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.

- 5450-80 Limestone-100% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
- 5480-5510 Limestone-100% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
- 5510-40 Limestone-100% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
- 5540-70 Limestone-30% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
Shale-50% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
Anhydrite-20% white, silty, chalky, soft.
- 5570-5600 Limestone-60% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
Shale-40% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
- 5600-30 Limestone-30% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
Shale-60% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
Anhydrite-10% white, silty, chalky, soft.
- 5630-60 Limestone-80% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
Shale-20% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
- 5660-90 Limestone-90% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
Shale-10% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.

- 5690-5720 Limestone-100% light to medium gray brown, very fine to microcrystalline, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
- 5720-50 Limestone-100% light to medium gray brown, very fine to microcrystalline, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
- 5750-80 Limestone-100% light to medium gray brown, very fine to microcrystalline, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
- 5780-5810 Limestone-30% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
Shale-60% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
Anhydrite-10% white, silty, chalky, soft.
- 5830-60 Limestone-50% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
Shale-20% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
Siltstone-30% white, arenaceous, chalky, soft to firm.
- 5860-90 Limestone-90% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
Shale-10% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
- 5890-5920 Limestone-100% light to medium gray brown, very fine to microcrystalline, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.

- 5920-50 Limestone-20% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
SHALE-80% red brown, red, light gray, soft, limy, clay, mottled, slightly calcareous, blocky, firm.
- 5950-80 Limestone-10% light to medium gray brown, dense, hard, crystalline in part, blocky, earthy, argillaceous, soft in part, lithographic, abundant white calcite fracture fill, mudstone.
SALT-90% white, crystalline, translucent.
- 5980-6010 SALT-100% white, crystalline, translucent.
- 6010-40 SALT-100% white, crystalline, translucent.
- 6040-70 SALT-70% white, crystalline, translucent.
SHALE-30% red brown, silty, firm, slightly calcareous.
- 6070-6100 SALT-100% white, crystalline, translucent.
- 6100-30 Limestone-100% light brown, light gray brown, light gray, very fine to microcrystalline, dense, hard, tight, argillaceous, earthy, mudstone, abundant light gray, white, crystalline calcite, fracture fill.
- 6130-60 Limestone-100% light brown, light gray brown, light gray, very fine to microcrystalline, dense, hard, tight, argillaceous, earthy, mudstone, abundant light gray, white, crystalline calcite, fracture fill, marly in part.
- 6160-90 Limestone-100% light brown, light gray brown, light gray, very fine to microcrystalline, dense, hard, tight, argillaceous, earthy, mudstone, abundant light gray, white, crystalline calcite, fracture fill, marly in part.
- 6190-6220 Limestone-100% light brown, light gray brown, light gray, very fine to microcrystalline, dense, hard, tight, argillaceous, earthy, mudstone, abundant light gray, white, crystalline calcite, fracture fill, marly in part.
- 6220-50 Limestone-100% light brown, light gray brown, light gray, very fine to microcrystalline, dense, hard, tight, argillaceous, earthy, mudstone, abundant light gray, white, crystalline calcite, fracture fill, marly in part.

- 6250-80 LIMESTONE-100% light brown, light gray brown, light gray, very fine to microcrystalline, dense, hard, tight, argillaceous, earthy, mudstone, abundant light gray, white, crystalline calcite, fracture fill, marly in part.
- 6280-6310 LIMESTONE-100% light brown, light gray brown, light gray, very fine to microcrystalline, dense, hard, tight, argillaceous, earthy, mudstone, abundant light gray, white, crystalline calcite, fracture fill, marly in part.
- 6310-40 LIMESTONE-100% light brown, light gray brown, light gray, very fine to microcrystalline, dense, hard, tight, argillaceous, earthy, mudstone, abundant light gray, white, crystalline calcite, fracture fill, marly in part.
- 6340-70 LIMESTONE-100% light brown, light gray brown, light gray, very fine to microcrystalline, dense, hard, tight, argillaceous, earthy, mudstone, abundant light gray, white, crystalline calcite, fracture fill, marly in part.
- 6370-6400 LIMESTONE-100% light brown, light gray brown, light gray, very fine to microcrystalline, dense, hard, tight, argillaceous, earthy, mudstone, abundant light gray, white, crystalline calcite, fracture fill, marly in part.
- 6400-30 LIMESTONE-100% light gray brown, mottled, very fine microcrystalline, dense, mudstone to packstone, scattered oolites, grainstone in part, tight.
- 6430-60 LIMESTONE-100% light gray brown, mottled, very fine microcrystalline, dense, mudstone to packstone, shell fragments, scattered oolites, grainstone in part, tight.
- 6460-90 LIMESTONE-90% light gray brown, gray brown, mottled, chalky, shell fragments, very fine to microcrystalline, mudstone to packstone, scattered oolites, yellow gold fluorescence, brown oil stain on fracture faces, slow milky cut, thin residual ring.
SANDSTONE-10% white, light gray, very fine to fine grained, sub angular, fair to well sorted, calcareous matrix and cement, tight, no show.
- 6490-6520 SANDSTONE-100% white, clear, quartzose, light brown, fine (lower) to fine (upper) grained, sub angular to rounded, fair to poor sorted, clay matrix, calcareous cement, friable, 10-14% intergranular porosity, 60% unconsolidated, fine (upper) to medium (upper) grained, yellow gold oil fluorescence, rainbows on the wash fluid, strong hydrocarbon odor, yellow to white milky cut fluorescence, yellow gold residual ring cut.

- 6550-80 SANDSTONE-100% white, clear, quartzose, light brown, fine (lower) to fine (upper) grained, sub angular to rounded, fair to poor sorted, clay matrix, calcareous cement, friable, 10-14% intergranular porosity, 98% unconsolidated, fine (upper) to medium (upper) grained, yellow gold oil fluorescence, rainbows on the wash fluid, strong hydrocarbon odor, yellow to white milky cut fluorescence, yellow gold residual ring cut.
- 6580-6610 SHALE-40% red brown, silty, blocky, slightly calcareous.
 ANHYDRITE-30% white, chalky, soft, sucrosic.
 SANDSTONE-30% white, clear, quartzose, light brown, fine (lower) to fine (upper) grained, sub angular to rounded, fair to poor sorted, clay matrix, calcareous cement, friable, 10-14% intergranular porosity, 10% unconsolidated, fine (upper) to medium (upper) grained, yellow gold oil fluorescence, rainbows on the wash fluid, strong hydrocarbon odor, yellow to white milky cut fluorescence, yellow gold residual ring cut.
- 6610-19 SHALE-30% red brown, silty, blocky, slightly calcareous.
 ANHYDRITE-10% white, chalky, soft, sucrosic.
 SANDSTONE-60% white, clear, quartzose, light brown, fine (lower) to fine (upper) grained, sub angular to rounded, fair to poor sorted, clay matrix, calcareous cement, friable, 10-14% intergranular porosity, 10% unconsolidated, fine (upper) to medium (upper) grained, yellow gold oil fluorescence, rainbows on the wash fluid, strong hydrocarbon odor, yellow to white milky cut fluorescence, yellow gold residual ring cut.
- 6619-89 See Core Descriptions 1-3
- 6690-6700 SHALE-10% red brown, silty, sandy, blocky, slightly calcareous.
 SILTSTONE-30% white, silty, sandy, soft to firm, chalky, slightly calcareous.
 SANDSTONE-60% light brown, white, clear, very fine (upper) grained, sub angular, fair to well sorted, clay matrix, dolomitic cement, tight, no to weak show.
- 6700-10 SILTSTONE-20% white, silty, sandy, soft to firm, chalky, slightly calcareous.
 SANDSTONE-80% light brown, white, clear, very fine (upper) grained, sub angular, fair to well sorted, clay matrix, dolomitic cement, tight, no to weak show.

- 6710-20 SHALE-10% red brown, silty, sandy, blocky, slightly calcareous.
SILTSTONE-20% white, silty, sandy, soft to firm, chalky, slightly calcareous.
SANDSTONE-70% light brown, white, clear, very fine (upper) grained, sub angular, fair to well sorted, clay matrix, dolomitic cement, tight, no to weak show.
- 6720-30 SHALE-20% red brown, silty, sandy, blocky, slightly calcareous.
SILTSTONE-50% white, silty, sandy, soft to firm, chalky, slightly calcareous.
SANDSTONE-40% light brown, white, clear, very fine (upper) grained, sub angular, fair to well sorted, clay matrix, dolomitic cement, tight, no to weak show.
- 6730-40 SHALE-30% red brown, silty, sandy, blocky, slightly calcareous.
SILTSTONE-40% white, silty, sandy, soft to firm, chalky, slightly calcareous.
SANDSTONE-30% light brown, white, clear, very fine (upper) grained, sub angular, fair to well sorted, clay matrix, dolomitic cement, tight, no to weak show.
- 6739-6852 See Core Descriptions 4-6
- 6852-80 SANDSTONE-100% white, clear, quartzose, fine(lower) to medium (lower) grained, sub angular to rounded, 100% unconsolidated, abundant bit flour, no to weak show
- 6880-6910 SANDSTONE-100% white, clear, quartzose, fine(lower) to medium (lower) grained, sub angular to rounded, clay matrix, siliceous cement, friable, 98% unconsolidated, abundant bit flour, no to weak show
- 6910-40 SANDSTONE-100% white, clear, quartzose, very fine(upper) to medium (lower) grained, sub angular to rounded, clay matrix, siliceous cement, friable, 100% unconsolidated, abundant bit flour, no to weak show
- 6940-70 SANDSTONE-100% white, clear, quartzose, very fine(upper) to medium (lower) grained, sub angular to rounded, clay matrix, siliceous cement, friable, 100% unconsolidated, abundant bit flour, no to weak show
- 6970-7000 SANDSTONE-100% white, clear, quartzose, very fine(upper) to medium (lower) grained, sub angular to rounded, clay matrix, siliceous cement, friable, 100% unconsolidated, abundant bit flour, no to weak show

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Steven R. Hash, P.E.
Registered Professional Engineer
stevehash@exactengineering.com

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September 6, 2005

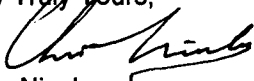
Mr. Dustin Doucet
Utah Division of Oil, Gas & Mining
1594 West North Temple, Suite 1210
Salt Lake City, UT 84114-5801

Re: Wolverine Federal 17-3 well
Sec 17 T23S R01W
Sevier Co, UT
API# 43-041-30036
BLM Lease No. UTU-73528

Dear Mr. Doucet,

On behalf of Wolverine Gas and Oil Company of Utah, LLC, please find enclosed our daily completion activity reports for the subject well. Wolverine's Grand Rapids, Michigan office will send final completion form(s). We respectfully request that the enclosed information remain confidential.

Very Truly Yours,



Chris Nicely
Engineering Technician

copy without enclosures via email to:

Wolverine Gas & Oil Co of Utah, LLC: Helene Bardolph
EXACT Engineering, Inc. well file

RECEIVED

SEP 09 2005

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due diligence, acquisitions, procedures, temporary personnel and field supervision

Daily Completion Report

Wolverine Gas & Oil Company of Utah, LLC
Wolverine Federal #17-3 well
SE NW Sec 17 T23S - R01W
Sevier Co., Utah

page 1 of 6

New Completion

5-1/2" 17# L80 @ 7100' TD
PBTD 7046' on 1/24/05; CBL TD 7024'
Perfs - 6590-6600; 6615-6619; 6632-6644; 6654-6662; 6671-6678; 6702-6709 on 7/21/05

ESP set @ na
GL to RKB: 17'

"TIGHT HOLE"

07/19/05 **FIRST COMPLETION REPORT** - during July cleaned location, installed 11" 5m x 7-1/16" 5m tbg head with (2) 2-1/16" 5m gate valves w/ single valve tree, move in 4% KCL treating fluid and flowback tanks. Offload 463 jts of 2-7/8" 6.5ppf N80 EUE 8rd new tbg. MIRU Pool Well Service Unit @ 11am, ND wellhead & flowline, NU 7-1/16" 5m BOP, set up pipe racks & load with tbg & strap. Pick up 4-3/4" bit, 5-1/2" csg scraper, xo & pick up 154 jts tbg to 4764'. SWI & SDFN. Tomorrow's plan: Finish TIH & pickle tbg. CMOL: Darren Naylor

Est Daily Completion Cost	\$ [REDACTED] (incl csg,FL,WH,tbg)	Completion AFE	\$ [REDACTED]
Est Cumulative Comp Cost	\$ [REDACTED]	Dryhole AFE	\$ [REDACTED]
Est Dryhole Cost	\$ [REDACTED]	Total Well Cost AFE	\$ [REDACTED]
Est Total Well Cost to date	\$ [REDACTED]		

07/20/05 Finish picking up 2-7/8" tbg. Tag up @ 7032' kb with 227 jts, set tbg 5' off btm, close rams, RU Halco to tbg. Hold safety mtg, pump tubular cleanup job consisting of 15 bbls caustic wash, 12 bbls chemical wash, 15 bbl gel water, 10 bbl FW spacer, 7 bbl 7.5% HCL. Displace down tbg with 80 bbl FW to surface, switch lines to csg, reverse hole with 200 bbl 4% KCL sending dirty acid water to pit. Hole clean after 140 bbls, RD Halco. RU swab, swabbed well down to 1400' fs, recv 31 BW. LD 9 jts and stand back 218 jts. SWI & SDFN. Tomorrow's plan: CBL, perf & run tools CMOL: Steve Hash

Est Daily Completion Cost	\$ [REDACTED]	Completion AFE	\$ [REDACTED]
Est Cumulative Comp Cost	\$ [REDACTED]	Dryhole AFE	\$ [REDACTED]
Est Dryhole Cost	\$ [REDACTED]	Total Well Cost AFE	\$ [REDACTED]
Est Total Well Cost to date	\$ [REDACTED]		

07/21/05 RU WellServ WLU & run cement bond log in 5-1/2 csg from logger's TD 7024' to top of cement at 4830' kb. Found marker joint at 6024 to 6046'. Perforated in two gun runs the (6) Upper Navajo 1 intervals listed below with 6 jpf (288 holes total) per Spectral Density - Dual Spaced Neutron log dated 22-Jan-2005. Used 4" slick gun, Titan 25 gm charges for .41" hole diam and 45" penetration, RD WLU. Make up 5-1/2" PIP assy w/ mech CCL & TIH to 6500', leave pkrs swinging and SWI & SDFN. Tomorrow's plan: Acidize CMOL: Steve Hash This am SITP 55 psig.

(1)	Upr Navajo 1	6590-6600	10	6 jpf	60	60	.41	45"
(2)	Upr Navajo 1	6615-6619	4	6 jpf	24	60	.41	45"
(3)	Upr Navajo 1	6632-6644	12	6 jpf	72	60	.41	45"
(4)	Upr Navajo 1	6654-6662	8	6 jpf	48	60	.41	45"
(5)	Upr Navajo 1	6671-6678	7	6 jpf	42	60	.41	45"
(6)	Upr Navajo 1	6702-6709	7	6 jpf	42	60	.41	45"
	total	119 gross	48		288			

Est Daily Completion Cost	\$ [REDACTED]	Completion AFE	\$ [REDACTED]
Est Cumulative Comp Cost	\$ [REDACTED]	Dryhole AFE	\$ [REDACTED]
Est Dryhole Cost	\$ [REDACTED]	Total Well Cost AFE	\$ [REDACTED]
Est Total Well Cost to date	\$ [REDACTED]		

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Daily Completion Report

Wolverine Gas & Oil Company of Utah, LLC
Wolverine Federal #17-3 well
SE NW Sec 17 T23S - R01W
Sevier Co., Utah

page 2 of 6

New Completion

5-1/2" 17# L80 @ 7100' TD
PBTD 7046' on 1/24/05; CBL TD 7024'
Perfs - 6590-6600; 6615-6619; 6632-6644; 6654-6662; 6671-6678; 6702-6709 on 7/21/05

ESP set @ na
GL to RKB: 17'

"TIGHT HOLE"

07/22/05 15hr SITP 55 psi, bled off. TIH w/ pkr assy and straddled perf set #6 6702-6709; RU Halco, QC 7-1/2% acid mix @ 1.15 sg and 4% KCl @ 1.04 sg, OK. Hold safety mtg & test P&L to 6000 psi. Spot 700 gal acid to pkr, hole load w 3 bbls, circ 30 BO off backside. Individually acidize each interval as follows:

#	Ft	Plan gals	Pmpd Gals	Break psi	BD bpm	ATR bpm	ATP psi	ISDP psi	5m psi	10m psi	15m psi	Comments
6	7	700	700	3930	2	4	3300	2350	1650	1504	1396	Title
5	7	700	100	3300	1.5	na	Na	1300				Communicated
4	8	600	200	3100	2	na	Na	1350				Communicated
3	12	1200	200	3200	2	na	Na	1400				Communicated
2	4	400	200	2600	.5	.8	2500	2300				Title
1	10	1000	500	3900	.5	2	2800	2150	800			No go-respot 500gal

Slight pkr leak on last zone, release pkrs and reset above all perfs w/ EOT @ 6546'. RU sandline overshot, retrieve SV from upper pkr. 81 BLWTR, RU to swab, BFL 400' fs, made 13 swab runs in 3 hrs, 1st oil cut on 5th run, 20%. Recovered 91 bbls fluid to tank. EFL 2900', pulling from 4500' fs, well trying to flow. SWI&SDFN. Plan: re-acidize 1,2,6 with 15% HCL. CMOL: Steve Hash

This am SITP 400psi, flowed 4 BO in 1 hr by heads.

Est Daily Completion Cost \$ [REDACTED]
 Est Cumulative Comp Cost \$ [REDACTED]

07/23/05 9 hr SITP 400 psi, bled down, drop SV & tested pkr to 1000 psi. Released tools, reverse circulated oil from tbq w/ 40 bbls 4%, TIH & straddle zone 6, spot 400 gal 15% HCL, pkr would not hold, reverse acid into tbq, reset across zone 2, same results, across zone 1, same results, reset above all perfs and would not hold, POOH with PIP assy, 4 pkr elements missing. PU 5-1/2" HD pkr and TIH to 6530', establish IR @ 3bpm @ 2500 psi, pump 4600 gal 15% NeFeHCL w/ 500 ball sealers, ATR 3 bpm, ATP 2700 psi, max 2800 psi, no break. Flush w 60 bbls 4%, ISDP 2400 psi, 5 min 1800, 10min 1400, 15 min 1210. 176 BLWTR. RD Halco, flow back 15 bbl, RU swab, BFL zero, made 10 swab runs and recovered 103 BLW, last 2 runs show oil, EFL 1600', pulling from 3100'. Left open to tank overnight, 58 BLWTR. Well flowing in am CMOL: Steve Hash

Est Daily Completion Cost \$ [REDACTED]
 Est Cumulative Comp Cost \$ [REDACTED]

07/24/05 Left well open to tank at 11:30pm, well kicked off flowing during night and flowed 65 bbls fluid until 10am, last hr 75% oil, FTP zero. Continued to flow well on 24/64" chk w FTP zero from 10am til 4pm. Recovered 42 bbls, samples 100% oil, no water, well cleaned up @ 11am, avg 7 BOPH, reduced to 12/64" chk @ 4pm, FTP 50 psi. Released crew, flowed to tank overnight simulating line pressure. CMOL: Steve Hash Plan: run BHPBU.

Est Daily Completion Cost \$ [REDACTED]
 Est Cumulative Comp Cost \$ [REDACTED]

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Daily Completion Report

Wolverine Gas & Oil Company of Utah, LLC
Wolverine Federal #17-3 well
SE NW Sec 17 T23S - R01W
Sevier Co., Utah

page 3 of 6

New Completion

5-1/2" 17# L80 @ 7100' TD
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Perfs - 6590-6600; 6615-6619; 6632-6644; 6654-6662; 6671-6678; 6702-6709 on 7/21/05

"TIGHT HOLE"

ESP set @ na
GL to RKB: 17'

07/25/05 5am FTP 55psi on a 12/64" chk, rec 82 bbls in 12 hrs flowing, 100% oil samples, avg 6.8 bphr. Released pkr, reversed oil from tbg with 53 bbls KCl, well dead. POOH w/ 211 jts tbg & pkr, LD pkr, PU replacement 5-1/2" HD pkr, run perf tailpipe with digital BHP instruments in place, 2.25" SN min id, set pkr with EOT & gauges @ 6542' kb w 30k down. ND BOP, NU 3m adapter & tree, hook up flowlines and rig up swab. Swabbed 60 bbls fluid in 1-1/2 hrs, last sample 75% oil, EFL 1700', slight gas show, RD swab, RD rig while well building up. Move rig to WF 17-5 well. Pulled water off flow back tank, color cut tank @ 306 BO. Well kicked off flowing @ 4:30pm, flowed 38 BO in 4 hrs until 8:30pm (8,11, 8 & 11 bbls respectively). Reduced chk to 10/64" and monitored hourly overnight as follows:

Time	chk	ftp	Bbl per hr	Sample description & comments
9:30p	10/64	60	8	100% oil; slight show gas
10:30p	10/64	60	10	ditto
11:30p	10/64	60	6	ditto
12:30a	10/64	60	8	ditto
1:30a	10/64	60	7	ditto
2:30a	10/64	85	5	ditto
3:30a	10/64	90	8	Ditto
4:30a	10/64	90	5	ditto
5:00a	10/64	90	3	Ditto; shut well in @ 5:00am 7/26/05

Total daily recovery 108 BO. Plan: SWIFBHPBU CMOL: Steve Hash

Est Daily Completion Cost \$ [REDACTED]
Est Cumulative Comp Cost \$ [REDACTED]

07/26/05 SWIFBHPBU @ 5am, 6am SITP 180, 7am SITP 230, 12pm SITP 270, 6pm SITP 380, 7am SITP 395

07/27/05 SWIFBHPBU, 7am SITP 395, 12pm SITP 410, 7pm SITP 420, 7am SITP 420
Plan to pull recorders on 7/29/05

07/28/05 SWIFBHPBU, 7am SITP 420, 7pm SITP 430

07/29/05 SWIFBHPBU, 7am SITP 430, RJ PLS slickline, RIH & retrieve BHP recorder, leave well shut in.
Field readings: 2843 psi BHP and 183 degr F
Est Daily Completion Cost \$ [REDACTED]
Est Cumulative Comp Cost \$ [REDACTED]

07/30/05 SITP 440 psi

07/31/05 SITP 440 psi

08/01/05 SITP 440 psi, installing flowline emulsion chemical pump and preparing to flow test well.

08/03/05 SITP 440 psi. Start flowing well on 10/64th chk w FTP 165 psi from 8am til 8pm. Recovered 92 bbls, samples 100% oil, no water in samples, avg 7.6 BOPH. Flowed to tank overnight, 8pm til 8am. Recovered 46 bbls samples 100% oil, no water in samples, avg 3.8 BOPH

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Wolverine Gas & Oil Company of Utah, LLC
Wolverine Federal #17-3 well
SE NW Sec 17 T23S - R01W
Sevier Co., Utah

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New Completion
5-1/2" 17# L80 @ 7100' TD
PBD 7046' on 1/24/05; CBL TD 7024'
Perfs – 6590-6600; 6615-6619; 6632-6644; 6654-
6662; 6671-6678; 6702-6709 on 7/21/05

ESP set @ na
GL to RKB: 17'

"TIGHT HOLE"

08/04/05 Flow well on 12/64th chk w FTP 50 psi from 8am til 8pm. Recovered 71 bbls, samples 100% oil, no water in samples, avg 5.9 BOPH. 8pm til 8am. FTP 40 psi Recovered 93 bbls samples 100% oil, no water in samples, avg 7.75 BOPH. Total daily recovery 164 BO

08/05/05 Flow well on 12/64th chk w FTP 50 psi. Total daily recovery 174 BO

08/06/05 Flow well on 12/64th chk w FTP 35 psi. Total daily recovery 172 BO

08/07/05 Flow well on 12/64th chk w FTP 35 psi. Total daily recovery 184 BO

08/08/05 Flow well on 12/64th chk w FTP 35 psi. Total daily recovery 176 BO

08/09/05 Flow well on 12/64th chk w FTP 35 psi. Total daily recovery 153 BO. No water in samples.

FIRST OIL SALES FROM WF17-3 TO HOLLY REFINERY ON 08/05/05

188 BO 41.2 API.

08/10/05 Total production to date 1311 BO. Total sales 898 bbl.
Flow well on 12/64th chk w FTP 35 psi. Total daily recovery 187 BO. No water in samples.
Total production to date 1497 BO. Total sales 1200 bbl.

8/11/05 Flow well on 12/64th chk w FTP 25 psi. Total daily recovery 213 BO. No water in samples.
Total production to date 1710 BO. Total sales 1222 bbl.

8/12/05 Flow well on 12/64th chk w FTP 0 psi. Total daily recovery 150 BO. No water in samples.
Total production to date 1860 BO. Total sales 1535 bbl.

8/13/05 Flow well on open chk w FTP 0 psi. Total daily recovery 162.5 BO. No water in samples.
Total production to date 2022 BO. Total sales 1646 bbl

8/14/05 Flow well on open chk w FTP 0 psi. Total daily recovery 200 BO. No water in samples.
Total production to date 2222 BO. Total sales 1646 bbl

8/15/05 Flow well on open chk w FTP 0 psi. Total daily recovery 146 BO. No water in samples.
Total production to date 2368 BO. Total sales 2109 bbl

8/16/05 Flow well on open chk w FTP 0 psi. Total daily recovery 145 BO. No water in samples.
Total production to date 2513 BO. Total sales 2109 bbl

8/17/05 Flow well on open chk w FTP 0 psi. Total daily recovery 161 BO. No water in samples.
Total production to date 2674 BO. Total sales 2236 bbl

8/18/05 No report

8/19/05 Flow well on open chk w FTP 0 psi. Total daily recovery 210 BO. 8.7 BPH
Total production to date 2884 BO. Total sales 2272 bbl

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Wolverine Federal #17-3 well
SE NW Sec 17 T23S - R01W
Sevier Co., Utah

page 5 of 6

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Perfs - 6590-6600; 6615-6619; 6632-6644; 6654-
6662; 6671-6678; 6702-6709 on 7/21/05

ESP set @ na
GL to RKB: 17'

"TIGHT HOLE"

8/20/05 Flow well on open chk w FTP 0 psi. Total daily recovery 212 BO. 8.8BPH
Total production to date 3096 BO. Total sales 2566 bbl

8/21/05 Flow well on open chk w FTP 0 psi. Total daily recovery 144 BO. 6 BPH
Total production to date 3240 BO. Total sales 2646 bbl

8/22/05 Flow well on open chk w FTP 0 psi. Total daily recovery 140 BO. 5.8 BPH
Total production to date 3380 BO. Total sales 2957 bbl

8/23/05 Flowed 126 BO & trace water in 24 hrs on open chk, FTP 0 psi
Total production to date 3506 BO. Total sales 3098 bbl CMOL: SRHash

8/24/05 Flowed 129 BO & trace water in 24 hrs on open chk, FTP 0 psi
Total production to date 3635 BO. Total sales 3098 bbl CMOL: SRHash

8/25/05 Flowed 131 BO & trace water in 24 hrs on open chk, FTP 0 psi
Total production to date 3766 BO.

8/26/05 Flowed 112 BO & trace water in 24 hrs on open chk, FTP 0 psi
Total production to date 3878 BO

8/27/05 Flowed 110 BO & trace water in 24 hrs on open chk, FTP 0 psi

8/28/05 Flowed 108 BO & trace water in 24 hrs on open chk, FTP 0 psi

8/29/05 Flowed 104 BO & trace water in 24 hrs on open chk, FTP 0 psi

8/30/05 Flowed 107 BO & trace water in 24 hrs on open chk, FTP 0 psi

8/31/05 Flowed 72 BO & trace water in 16 hrs on open chk until 2pm 8/30, FTP 0 psi

09/01/05 Flowed 103 BO & trace water in 24 hrs on open chk from 2pm 8/30 to 2pm 8/31, FTP 0 psi

09/02/05 Flowed 112 BO & trace water in 24 hrs on open chk from 2pm 8/31 to 2pm 9/01, FTP 0 psi
Total production to date 4594 BO (less some water drawoff); Total frac tank sales from inception on
8/5/05 thru 2pm 9/1/05 is 4051 BO. Sales report turned over to production staff.

09/03/05 Flowed 114 BO & trace water in 26 hrs on open chk from 2pm 9/01 to 4pm 9/02, FTP 0 psi
Total production to date 4708 BO. Switched flow from frac tanks thru flowline to main battery.
Production now allocated daily based on well test

09/04/05 Flowed 93 BO allocated thru main battery from 4pm 9/2 thru 2pm 9/3, FTP 20 psi on open chk

09/05/05 Flowed 104 BO allocated thru main battery from 2pm 9/3 thru 2pm 9/4, FTP 20 psi on open chk

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SE NW Sec 17 T23S - R01W
Sevier Co., Utah

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Perfs – 6590-6600; 6615-6619; 6632-6644; 6654-
6662; 6671-6678; 6702-6709 on 7/21/05

ESP set @ na
GL to RKB: 17'

"TIGHT HOLE"

09/06/05 Switched well from main battery back to test tank at 2pm due to valve leak.
Flowed 95 BO and tr wtr on open chk in 24 hrs to test tank from 2pm 9/4 to 2pm 9/5

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Steven R. Hash, P.E.
Registered Professional Engineer
stevehash@exactengineering.com

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September 19, 2005


Mr. Dustin Doucet
Utah Division of Oil, Gas & Mining
1594 West North Temple, Suite 1210
Salt Lake City, UT 84114-5801

Re: Wolverine Federal 17-3 well
Sec 17 T23S R01W
Sevier Co, UT
API# 43-041-30036
BLM Lease No. UTU-73528

Dear Mr. Doucet,

On behalf of Wolverine Gas and Oil Company of Utah, LLC, please find enclosed our final daily completion activity reports for the subject well for August 20 through September 13, 2005. Wolverine's Grand Rapids, Michigan office will send final completion form(s). We respectfully request that the enclosed information remain confidential.

Very Truly Yours,


Chris Nicely
Engineering Technician

copy without enclosures via email to:

Wolverine Gas & Oil Co of Utah, LLC: Helene Bardolph
EXACT Engineering, Inc. well file

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Petroleum Engineering Consulting, Personnel & Jobsite Supervision
complete well design, construction & management, drilling, completion, production, pipelines, appraisals,
due diligence, acquisitions, procedures, temporary personnel and field supervision

Daily Completion Report

Wolverine Gas & Oil Company of Utah, LLC
Wolverine Federal #17-3 well
SE NW Sec 17 T23S - R01W
Sevier Co., Utah

page 6 of 6

New Completion

5-1/2" 17# L80 @ 7100' TD
PBTD 7046' on 1/24/05; CBL TD 7024'
Perfs - 6590-6600; 6615-6619; 6632-6644; 6654-
6662; 6671-6678; 6702-6709 on 7/21/05

ESP set @ 5478' md (5025' tvd)
GL to RKB: 17'

"TIGHT HOLE"

- 09/06/05 Flowed 96 BO and tr wtr on open chk in 24 hrs to test tank from 2pm 9/4 to 2pm 9/5
- 09/07/05 Flowed 101 BO and tr wtr on open chk in 24 hrs to test tank from 2pm 9/5 to 2pm 9/6
- 09/08/05 Switched well to main battery and flowed 97 BO and tr wtr on open chk in 24 hrs
- 09/09/05 Flowed 96 BO and tr wtr in 24 hrs on open chk to main battery
- 09/10/05 Flowed 58 BO and tr wtr in 16 hrs on open chk. SWI @ 6am 9/9. RU WSU, strip on BOP w/ annular, reversed tbg volume & released pkr, LD 35 jts tbg, POOH w/ 211 jts total, LD tools. RU Baker Centrilift to run ESP, pick up motor, seal & pump w/ 2.25 SN & TIH banding #4 cable 3 bands per jt, splice feed thru and land btm of tbg @ 5497' md. ND BOPE & NU wellhead. Complete tbg setting shown below. Hook up flowlines, air supply & shutdowns. Pump in operation and on test @ 11:00pm; monitor pump conditions and rates overnight, 112 BLWTR. Pumped 266 bbls fluid in 7 hrs on a 32/64" chk w/ 25 psi PTP, 51 hz. Pump down @ 6am on underload. Troubleshoot, est production at 132 BO & 134 BLW.

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Production Tubing Setting - run in hole on 9/9/05

	Description	SN	Length	Top @ kb
1	4.50"od, 46hp, 770v, 39a, FMH motor	21F-0068739	13.60	5483 md
1	4.00"od, FSB3 FER SS CV seal	31F-0071892	5.56	5478 md
1	4.00"od, type P8, model 400P, 147 stg pump w intake	01F-0007391	13.50	5464 md
1	2-3/8" x 2-7/8" EUE 8rd xover		.75	
1	2-7/8" EUE 8rd SN (2.25" min id)		1.10	5463 md
1	2-7/8" 6.5# N80 EUE 8rd handling sub		4.06	
176	2-7/8" 6.5# N-80 EUE 8rd tbg joints		5441.52	
	Overall		5480.06	
	Set below KB (GL to KB = 17')		+17.0	
	EOT set @ KB		5497.06	
	EOT 5497'kb md; intake @ 5478'kb md (5025' tvd)			
	Note: there is NO check or drain valve in this well			

- 09/11/05 Manifold test tanks and restart well @ 1pm 9/10 on 24/64" chk, PTP 120 psi. Well pumped 1/2 hr and went down on underload again, reset min amps, pumped 396 bbls in 16 hrs until 6am 9/11 on 24/64" chk, 51 hz, samples 98% oil, tr wtr; est production at 388 BO & 8 BW, reduced chk to 18/64"
- 09/12/05 Pmpd 248 bbls fluid to test tank in 8 hrs on 18/64" to 12/64" chk from 6am 9/11 to 2pm 9/11, PTP 500 psi, running 51 hz. Estimate production at 243 BO & 5 BW; reduced chk to 9/64" @ 600 PSI ptp to reach target 450-500 BPD. Total estimated production to date is 6116 BO.
- 09/13/05 Pmpd 602 bbls fluid to test tank in 24 hrs on 9/64" chk from 2pm 9/11 to 2pm 9/12, PTP 550 - 650 psi, running 51 hz. Est production at 584 BO & 18 BW; some chk plugging on 9/64". total est production thru 9/12/05 @ 2pm is 6700 BO. water ph 7.0; water SG 1.012; oil gravity 41.6 API corrected. **TURNED WELL OVER TO PRODUCTION @ 2pm 9/12/05 FINAL COMPLETION REPORT - Thank you!**

EXACT Engineering, Inc. 415 S. Boston, Suite 734, Tulsa, OK 74103 (918) 599-9400

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New Completion

5-1/2" 17# L80 @ 7100' TD
PBD 7046' on 1/24/05; CBL TD 7024'
Perfs - 6590-6600; 6615-6619; 6632-6644; 6654-
6662; 6671-6678; 6702-6709 on 7/21/05

ESP set @ 5478' md (5025' tvd)
GL to RKB: 17'

"TIGHT HOLE"

8/20/05 Flow well on open chk w FTP 0 psi. Total daily recovery 212 BO. 8.8BPH
Total production to date 3096 BO. Total sales 2566 bbl

8/21/05 Flow well on open chk w FTP 0 psi. Total daily recovery 144 BO. 6 BPH
Total production to date 3240 BO. Total sales 2646 bbl

8/22/05 Flow well on open chk w FTP 0 psi. Total daily recovery 140 BO. 5.8 BPH
Total production to date 3380 BO. Total sales 2957 bbl

8/23/05 Flowed 126 BO & trace water in 24 hrs on open chk, FTP 0 psi
Total production to date 3506 BO. Total sales 3098 bbl CMOL: SRHash

8/24/05 Flowed 129 BO & trace water in 24 hrs on open chk, FTP 0 psi
Total production to date 3635 BO. Total sales 3098 bbl CMOL: SRHash

8/25/05 Flowed 131 BO & trace water in 24 hrs on open chk, FTP 0 psi
Total production to date 3766 BO.

8/26/05 Flowed 112 BO & trace water in 24 hrs on open chk, FTP 0 psi
Total production to date 3878 BO

8/27/05 Flowed 110 BO & trace water in 24 hrs on open chk, FTP 0 psi

8/28/05 Flowed 108 BO & trace water in 24 hrs on open chk, FTP 0 psi

8/29/05 Flowed 104 BO & trace water in 24 hrs on open chk, FTP 0 psi

8/30/05 Flowed 107 BO & trace water in 24 hrs on open chk, FTP 0 psi

8/31/05 Flowed 72 BO & trace water in 16 hrs on open chk until 2pm 8/30, FTP 0 psi

09/01/05 Flowed 103 BO & trace water in 24 hrs on open chk from 2pm 8/30 to 2pm 8/31, FTP 0 psi

09/02/05 Flowed 112 BO & trace water in 24 hrs on open chk from 2pm 8/31 to 2pm 9/01, FTP 0 psi
Total production to date 4594 BO (less some water drawoff); Total frac tank sales from inception on 8/5/05
thru 2pm 9/1/05 is 4051 BO. Sales report turned over to production staff.

09/03/05 Flowed 114 BO & trace water in 26 hrs on open chk from 2pm 9/01 to 4pm 9/02, FTP 0 psi
Total production to date 4708 BO. Switched flow from frac tanks thru flowline to main battery.
Production now allocated daily based on well test

09/04/05 Flowed 93 BO allocated thru main battery from 4pm 9/2 thru 2pm 9/3, FTP 20 psi on open chk

09/05/05 Flowed 104 BO allocated thru main battery from 2pm 9/3 thru 2pm 9/4, FTP 20 psi on open chk
Switched well from main battery back to test tank at 2pm 9/4 due to valve leak

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STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

AMENDED REPORT ☒ FORM 8
(highlight changes)

5. LEASE DESIGNATION AND SERIAL NUMBER:
UTU-73528

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT or CA AGREEMENT NAME
Wolverine Federal Unit

8. WELL NAME and NUMBER:
Wolverine Federal 17-3

9. API NUMBER:
4304130036

10. FIELD AND POOL, OR WILDCAT
Covenant Field

11. QTR/QTR, SECTION, TOWNSHIP, RANGE,
MERIDIAN:
SENW 17 23S 1W 26

12. COUNTY
Sevier

13. STATE
UTAH

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. TYPE OF WELL: OIL WELL ☒ GAS WELL ☐ DRY ☐ OTHER

b. TYPE OF WORK: NEW WELL ☒ HORIZ. LATS. ☐ DEEP-EN ☐ RE-ENTRY ☐ DIFF. RESVR. ☐ OTHER Well Completion

2. NAME OF OPERATOR:
Wolverine Gas and Oil Company of Utah, LLC

3. ADDRESS OF OPERATOR: 55 Campau NW CITY Grand Rapids STATE MI ZIP 49503
PHONE NUMBER: (616) 458-1150

4. LOCATION OF WELL (FOOTAGES)
AT SURFACE: 1,680' FNL & 2,233' FWL
AT TOP PRODUCING INTERVAL REPORTED BELOW: 562' FWL & 2152' FSL
AT TOTAL DEPTH: 435' FWL & 2013' FSL

14. DATE SPURRED: 12/10/2004 15. DATE T.D. REACHED: 1/17/2005 16. DATE COMPLETED: 8/1/2005
ABANDONED ☐ READY TO PRODUCE ☒ 17. ELEVATIONS (DF, RKB, RT, GL): 5752,5753,5753,5736

18. TOTAL DEPTH: MD 7,150 TVD 6,603 19. PLUG BACK T.D.: MD 7,024 TVD 6,479 20. IF MULTIPLE COMPLETIONS, HOW MANY? * 21. DEPTH BRIDGE MD PLUG SET: TVD

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)

see addendum #1

23.
WAS WELL CORED? NO ☐ YES ☒ (Submit analysis)
WAS DST RUN? NO ☒ YES ☐ (Submit report)
DIRECTIONAL SURVEY? NO ☐ YES ☒ (Submit copy)

24. CASING AND LINER RECORD (Report all strings set in well)

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
30	20	.25"wall	0	123		class G 620		surface cir	
17.5	16 H-40	65	0	615		AG300 855	175	surface cir	
12.25	9 5/8 P110	47	0	5,828		50/50 730	186	3600 Cal	
8.5	5 1/2 L80	17		7,100		50/50 680	149	4,830 CBL	

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 7/8	6,551							

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
(A) Navajo	6,498	7,150	5,975	6,603				Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/>
(B)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
(C)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
(D)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>

27. PERFORATION RECORD

28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
6590-6709	7-1/2% acid mix @1.15 sg and 4%KCl @1.04sg Total - 1900 gal.
6590-6709	15% NcFeHCL w/500 ball sealers Total - 4600 gal

29. ENCLOSED ATTACHMENTS:

☒ ELECTRICAL/MECHANICAL LOGS ☒ GEOLOGIC REPORT ☐ DST REPORT ☒ DIRECTIONAL SURVEY
☐ SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION ☒ CORE ANALYSIS ☐ OTHER:

DIV. OF OIL, GAS & MINING

Producing

31. INITIAL PRODUCTION

INTERVAL A (As shown in item #26)

DATE FIRST PRODUCED: 8/5/2005	TEST DATE: 8/5/2005	HOURS TESTED: 408	TEST PRODUCTION RATES: →	OIL – BBL: 198	GAS – MCF: 0	WATER – BBL: 0	PROD. METHOD: Flowing
CHOKE SIZE: open	TBG. PRESS. 0	CSG. PRESS. 0	API GRAVITY 40.00	BTU – GAS 0	GAS/OIL RATIO 0	24 HR PRODUCTION RATES: →	INTERVAL STATUS: Producing

INTERVAL B (As shown in item #26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	INTERVAL STATUS:

INTERVAL C (As shown in item #26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	INTERVAL STATUS:

INTERVAL D (As shown in item #26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	INTERVAL STATUS:

32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

Venting (gas too small to measure)

33. SUMMARY OF POROUS ZONES (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
Arapien	55	85	Sand & silt water		
Navajo	6,498	7,100	Sand	Arapien	0
Core	6,619	6,688	See Geologic Report	Twin Creek	6,114
Core	6,739	6,816	See Geologic Report	Navajo	6,498
Core	6,817	6,634	See Geologic Report		

35. ADDITIONAL REMARKS (Include plugging procedure)

Note: 50' logging tool w/ Cesium source left in hole from 7100'-7150'. 5 1/2" casing set at 7100', float shoe @ 7046'.

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) John Vrona

TITLE Manager of Geology

SIGNATURE

DATE 8/23/2005

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation

- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

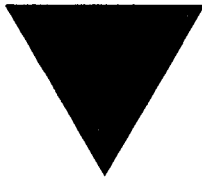
** ITEM 24: Cement Top – Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

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WOLVERINE OPERATING COMPANY
of Utah, LLC

Energy Exploration in Partnership with the Environment

December 28, 2005

Ms. Diana Whitney
Utah Division of Oil, Gas & Mining
1594 W. N. Temple, Suite 1210
Salt Lake City, UT 84114-5801

RE: Wolverine Federal #17-2
Wolverine Federal #17-3
Wolverine Federal #8-1

Dear Ms. Whitney:

Enclosed please find completion forms with minor corrections made for each of the above referenced wells.

If you have any questions or concerns, please don't hesitate to contact me.

Sincerely,

Helene Bardolph

cc: WF #17-2 (Well Log File)
WF #17-3 (Well Log File)
WF #8-1 (Well Log File)

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JAN 03 2006

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